No. 2013-1620

United States Court of Appeals For the Federal Circuit

MULTIMEDIA PATENT TRUST,

Plaintiff-Appellant,

v.

APPLE INC., LG ELECTRONICS, INC., LG ELECTRONICS MOBILECOMM U.S.A., INC., and LG ELECTRONICS U.S.A., INC.

Defendants-Appellees.

Appeal from the United States District Court for the Southern District of California in case no. 10-CV-2618, Judge Marilyn L. Huff

NON-CONFIDENTIAL BRIEF OF DEFENDANTS-APPELLEES

JUSTIN M. BARNES
LARA S. GARNER
FISH & RICHARDSON P.C.
12390 El Camino Real
San Diego, CA 92130
(858) 678-5070

Counsel for Defendants-Appellees LG Electronics, Inc., LG Electronics Mobilecomm U.S.A., Inc., and LG Electronics U.S.A., Inc.

GREGORY A. CASTANIAS
JENNIFER L. SWIZE
JONES DAY
51 Louisiana Ave., N.W.
Washington, DC 20001-2113
(202) 879-3939

Counsel for Defendant-Appellee Apple Inc.

(*Additional counsel listed on inside cover*.)

MICHAEL J. MCKEON
FISH & RICHARDSON P.C.
1425 K Street, NW, Suite 1100
Washington, DC 20005
(202) 783-5070

FRANK P. PORCELLI
FISH & RICHARDSON P.C.
One Marina Park Drive
Boston, MA 02210-1878
(617) 542-5070

Counsel for Defendants-Appellees LG Electronics, Inc., LG Electronics Mobilecomm U.S.A., Inc., and LG Electronics U.S.A., Inc.

WILLIAM C. ROOKLIDGE
JONES DAY
3161 Michelson Drive, Suite 800
Irvine, CA 92612-4408
(949) 851-3939

MARRON A. MAHONEY
JONES DAY
77 W. Wacker Drive
Chicago, IL 60601
(312) 782-3939

Counsel for Defendant-Appellee Apple Inc.

LG DEFENDANTS' CERTIFICATE OF INTEREST

Counsel for the LG Defendants certifies the following:

1. The full name of every party represented by counsel is:

LG Electronics, Inc., LG Electronics U.S.A., Inc., and LG Electronics Mobilecomm U.S.A., Inc.

2. The name of the real party in interest (if the party named in the caption is not the real party in interest) represented by counsel is:

N/A

3. All parent corporations and any publicly held companies that own 10 percent or more of the stock of the party or amicus curiae represented by me are:

LG Electronics Mobilecomm U.S.A., Inc. is a wholly owned subsidiary of LG Electronics U.S.A., Inc., organized under the laws of the State of Delaware, which is a wholly owned subsidiary of LG Electronics, Inc., a publicly owned company, organized under the laws of Republic of Korea. No publicly held company holds more than 10% of LG Electronics, Inc.'s stock.

4. The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this Court are:

Juanita R. Brooks, Michael J. McKeon, Justin M. Barnes, Richard A. Sterba, Lara S. Garner, Michael C. Tyler, Francis J. Albert, Kelly Hunsaker, all of **Fish & Richardson P.C.**

APPLE INC.'S CERTIFICATE OF INTEREST

Counsel for Apple, Inc. certifies the following:

1. The full name of every party represented by counsel is:

Apple Inc.

2. The name of the real party in interest (if the party named in the caption is not the real party in interest) represented by counsel is:

N/A

3. All parent corporations and any publicly held companies that own 10 percent or more of the stock of the party or amicus curiae represented by me are:

N/A

4. The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this Court are:

Fish & Richardson P.C.: Juanita R. Brooks, Michael J. McKeon, Justin M. Barnes, Richard A. Sterba, Lara S. Garner, Michael C. Tyler, Francis J. Albert, Kelly Hunsaker.

Jones Day: Gregory A. Castanias, William C. Rooklidge, Jennifer L. Swize, Marron A. Mahoney.

TABLE OF CONTENTS

Page

TABLE OF CONTENTS
(continued)

Page

TABLE OF CONTENTS
(continued)

Page

CONFIDENTIAL MATERIAL OMITTED

Pursuant to Federal Circuit Rule 28(d)(1)(B), the material omitted on pages 14, 16, and 61-63, which is subject to a protective order entered by the United States District Court for the Southern District of California, reflects terms of confidential license agreements between Defendant-Appellee Apple Inc. and a non-party.

TABLE OF AUTHORITIES

Page(s)

CASES

STATUTES

OTHER AUTHORITIES

STATEMENT OF RELATED CASES

Pursuant to Federal Circuit Rule 47.5, Defendants-Appellees state that this case is related to *Multimedia Patent Trust v. LG Electronics, Inc.*, No. 3:12-cv-02731-H-KSC (S.D. Cal.), *appeal pending*, No. 2013-1621 (Fed. Cir.). Plaintiff-Appellee Multimedia Patent Trust ("MPT") filed that case after the U.S. District Court for the Southern District of California ordered that certain of Defendant-Appellee LG Electronics, Inc.'s products should be struck from the instant case and severed into a related action. By order of this Court dated December 12, 2013, the cases will proceed as companion cases before the same merits panel. MPT has not contended under Federal Circuit Rule 47.5(b), however, that any of the issues in this appeal will or should directly affect the stricken products at issue in Appeal No. 2013-1621; Defendants-Appellees agree.

COUNTER-STATEMENT OF THE ISSUES

1. Whether MPT waived its challenge to the jury instruction regarding structural equivalence by failing to object to the language it now contests and even endorsing that same language below; and, regardless of waiver, whether the instruction correctly stated this Court's precedent by focusing the jury upon equivalence of overall structure.

2. Whether the district court correctly construed certain means-plus-function limitations of the '377 and '878 patent claims to include, as corresponding structure, the complete set of structures that perform MPT's recited functions, rather than merely the final or generic steps, as MPT proposes.

3. Whether the district court correctly interpreted the Apple-MPEG LA agreements as product licenses and not field-of-use licenses, where those parties expressly defined their original license as a product license and their renewal expressly disclaimed any amendment altering the license's scope.

COUNTER-STATEMENT OF FACTS

A. The Evolution Of Video Coding Technology

The three patents-in-suit relate to specific structures for performing well-known functions in the crowded field of video coding and decoding, also known as compression and decompression. With the advent of modern digital video, the video industry developed standards for transmitting video in a compressed format

suitable for limited bandwidth but without excessive loss of quality. A2670-75; A2700-01; A4011-15.

All modern video coding standards perform four basic functions:

- ***motion prediction and compensation***, which determines what has changed or moved between frames and transmits information on these changes (as "motion vectors" and "error");

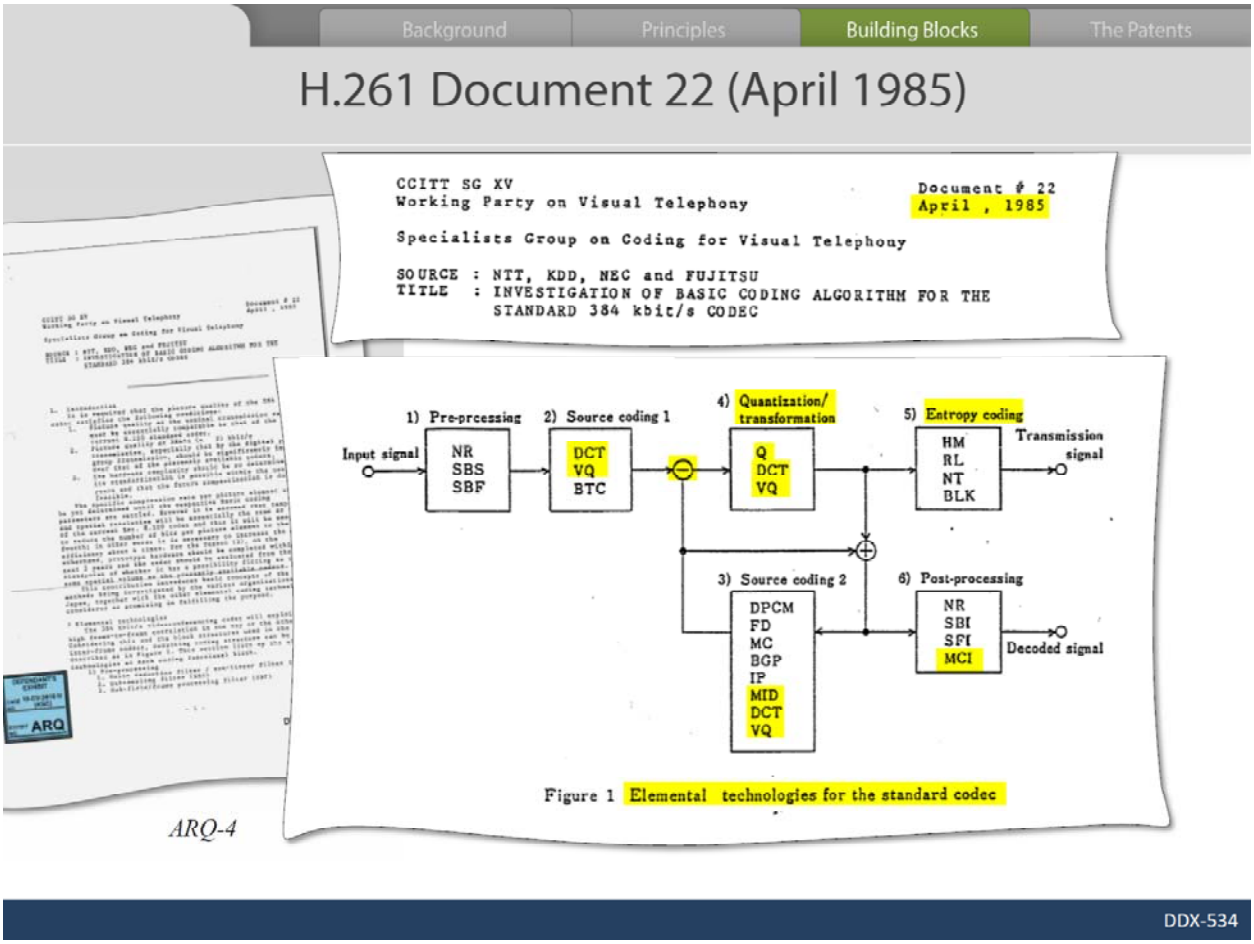
- ***frequency transformation***, which converts pixel data into a set of frequency coefficients for each frame of video (effectively revealing the strength of frequencies in the signal, such that the higher frequencies, which are hard for the human eye to detect, can be removed to compress the video images);

- ***quantization***, which essentially "rounds" the frequency coefficients to transmit less data in a manner that does not affect the image, because the eye cannot detect minute detail in moving video images; and

- ***entropy coding***, which codes the quantized data in a particular manner that allows for increased compression of the data.

The following overview of a video encoder, from an early (1985) standard called H.261, shows these four functions: "MCI [Motion Compensation]," "Quantization [and] transformation," and "entropy coding." A4016; A2670-75 (explaining graphic and the basic functions).[1]

[1] MPT's expert Dr. Richardson and '878 and '226 inventor Dr. Puri acknowledged that these existed prior to the patents. A1806-08; A2461-62; A2475-76.



Video coding technology has advanced over the years as various companies have developed new kinds of structures to perform these four basic functions. The structures implementing these basic functions vary widely depending on the particular standard, due in part to each standard's specific goals and application, and to advances in technology, which allow new structures that were not available or feasible earlier. A1775-76, A1782.

H.261, mentioned above, was the first practical digital video standard and was developed for teleconferencing. A2670-75. Since H.261, the industry has continuously developed newer standards aimed at improving shortcomings, such as

coding the same quality video with less size or effort or coding video for particular applications. The MPEG-1 and MPEG-2 standards, developed in the 1990s, sought to improve on H.261 and were designed for fixed mediums such as disks (*e.g.*, DVD) and fixed bandwidth transmission (television broadcasting). A1213-14, A1233-34, A1254-55; A1775; A2410-11, A2471; A2701. For each of these standards, dozens of companies proposed numerous structures to implement the same four basic functions. A1211, A1254-55; A1292-93; A1914-15; A2452, A2461, A2475, A2477.

In contrast, the accused products—computers, software applications, smart phones, tablets, and other handheld devices operating over the internet (A2-3)—practice a newer, different standard developed around 2000, H.264. With advances in video technology and the internet, the video industry determined that earlier standards were "distinctly old fashioned" and needed replacing. A2702-04; A1765-67. H.264 was a "reset"—a major advance that garnered hundreds of new proposals from companies around the world. A1767, A1778-80; A1914-15; A2411-17, A2449-50; A2702-06. Unlike MPEG-1 and MPEG-2 and their focus on fixed media, H.264 departed significantly from predecessor standards because it was adapted particularly for wireless, handheld devices, such as many of the accused products, and new structures were necessary for that technology. A2702-04.

Thus, while H.264 may perform the same basic functions as H.261 and other predecessor standards, the specific structures that H.264 utilizes to achieve increased coding efficiency bear little resemblance to the structures of earlier standards. A2702-06; A4017. It is undisputed that H.264 is not interchangeable or compatible with earlier standards. A1775-76, A1782. This is common sense, because companies would not have generated hundreds of proposals to develop a new standard if it merely mimicked the "distinctly old-fashioned" standards.

To protect their specific proposals for any particular standard, companies often file patent applications. A2414-17, A2450-52, A2461, A2475-77. There are more than 7,000 patents relating to video compression. A1809; A2645-46.

B. The Patents-In-Suit Claim Specific Structures For Compressing Video

MPT's predecessor, AT&T, was one of the companies making proposals for various video standards, and the patents-in-suit, which were all filed from 1989 to 1991 (*i.e.*, after H.261), covered AT&T's proposals. A2414-17, A2450-52, A2461, A2475-77. The last patent-in-suit expired in 2011.

The **'377 patent**, entitled "Adaptive Non-Linear Quantizer," relates generally to AT&T's proposed video coding technology for television broadcasts, although that technology was never adopted. In particular, the patent uses "leaky prediction" and a "frame mean" in the motion-compensation step and vector quantization in the quantization step. Leaky prediction incorporates multiplying a

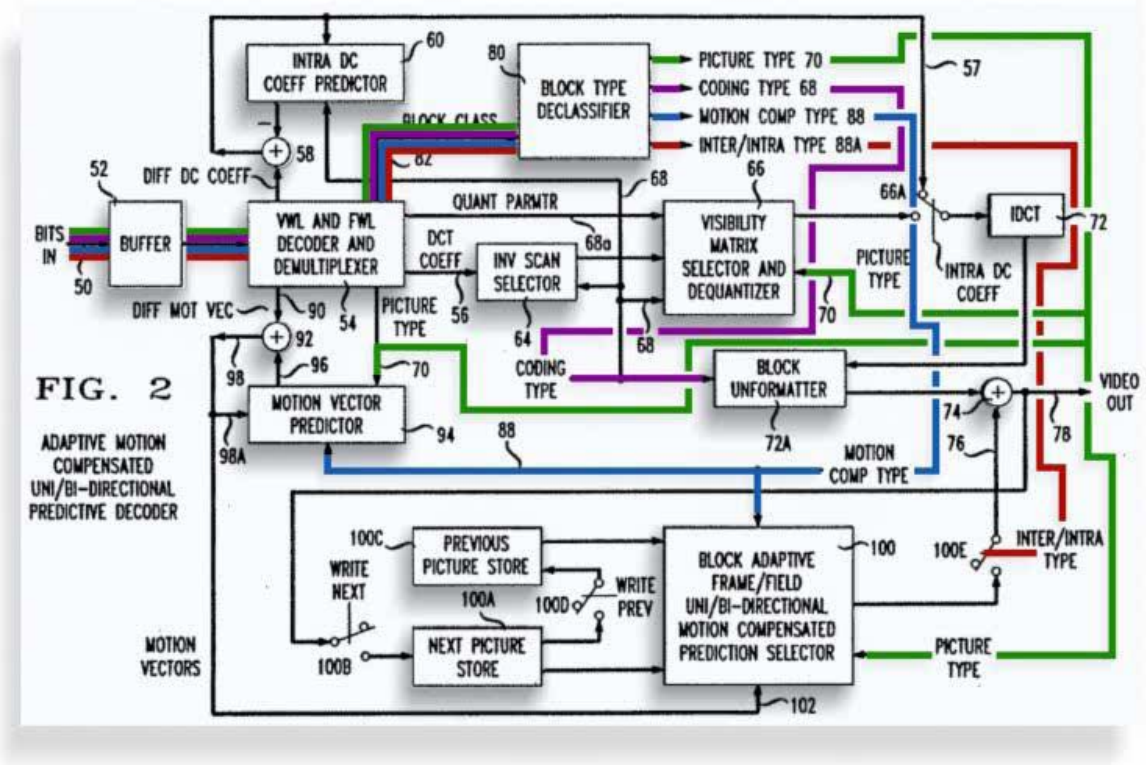
"leak factor" into the motion-compensation step that causes the encoder to transmit information on the "change" from frame to frame, plus some fraction (1 minus the leak factor) of the original frame. A342:12:34-A343:14:25. Leaky prediction requires more information to encode each predicted frame but can attenuate video display imperfections caused by transmission errors and help during channel tune-in. A1269-70; A2370-73; A2390-91; A4008. The patent also uses a vector quantization scheme to quantize the frequency coefficients. A2647-48. Vector quantization uses a codebook (list of codes) that specifies possible quantization vectors representing a data set, and chooses whichever vector is most appropriate for a given data set, transmitting only the code itself. This can help with decreasing the bits necessary to transmit relevant data, but requires immense time and power on the encoding side and significant memory on the decoding side to store the codebook. A2364-66; A2727-28. The '377 inventors admitted that the structures their patent disclosed were rejected by the various standards bodies. A2408, A2411, A2662-63.

The **'878 and '226 patents** both relate generally to MPEG-1 and MPEG-2 technology. The '878 patent, entitled "Adaptive Coding and Decoding of Frames and Fields of Video," claims to accomplish improved compression by adaptive and selective coding of digital signals depending on the characteristics of the input signal, such as:

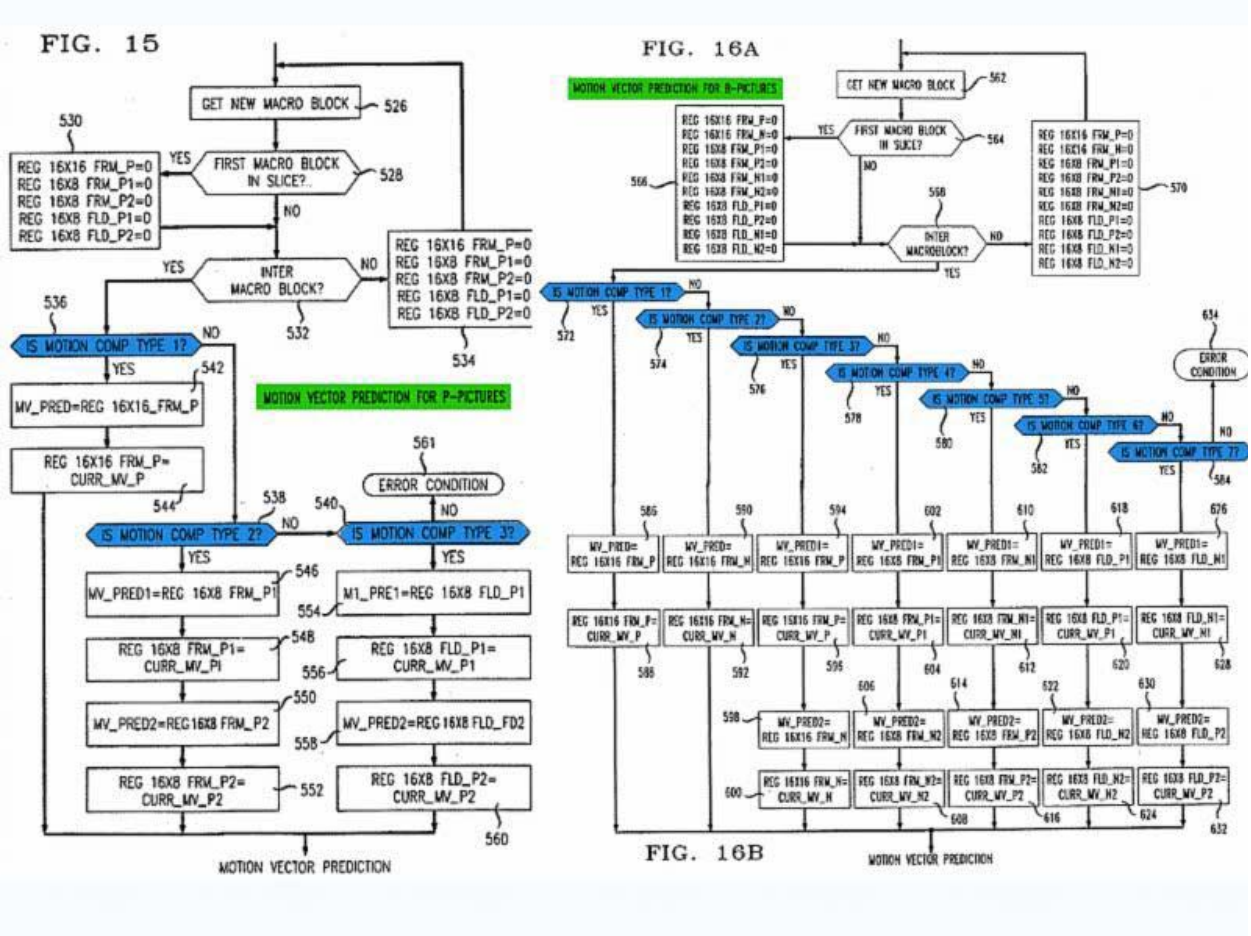
- Picture type (I-, P-, or B-picture).[2]
- Coding type—"frame" (whole picture) or "field" (subset of a picture, *e.g.*, odd- or even-numbered horizontal lines).
- "Motion compensation type" (for a given frame or field), which identifies the mode of motion compensation to be used. A88; A360-62 (identifying the different modes).
- Inter/intra type—P- and B-pictures are inter-frame; I-pictures are intra-frame.

[2] An I-picture is encoded only in reference to itself; it does not reference changes between frames. A P-picture has predictive, unilateral coding—it is coded based on changes from a prior frame. A B-picture has bidirectional coding—it is coded based on changes between prior and subsequent frames. A373:4:67-A374:5:8.

A2474; A2784-85, A2801-09. Depending on the various characteristics used, the claimed invention would code or decode video in different ways. *See, e.g.*, A360 (Figure 3) (showing different decoding paths depending on motion-compensation-type signal at switch 110, whether field or frame, whether macro or sub-macro blocks, etc.). At trial, using the patent's Figure 2, Defendants' expert Dr. Bovik explained how the various interrelated structures performed video decoding—the four signal types mentioned above, which he highlighted in green, purple, blue, and red, respectively, trigger different parts of the decoder to operate utilizing particular structures. A2801-09; A4018.



Figures 15 through 16B further show how the decoder's different operations depend on the particular signals' values. A4019.



The '226 patent relates to predicting a current frame by averaging motion vector data between a previous frame and a next frame. A2450-52.

The '878 and '226 patents were included in a pool of over 100 patents organized by MPEG LA, LLC ("MPEG LA") for MPEG-2 products. A2070-71, A2095-96; A2477; A3017-18. Through MPEG LA, Defendants have licenses to those patents for MPEG-2 products. Defendants also have licenses to MPEG LA's

H.264 patent pool, containing nearly 300 patents; the patents-in-suit are not part of that pool. A2071-72, A2090.

C. MPT's Litigation Strategy Ignored The Relevance Of Specific Corresponding Structures

A major focus of the litigation was whether the particular structures in MPT's 20-plus-year-old patents, proposed for now-outdated industry standards, were nonetheless "equivalent" to the state-of-the-art H.264-compliant structures in the accused products. All of the claims-in-suit are in § 112, ¶ 6 (now § 112(f)) format, and the specifications identify particular, specific structures corresponding to the recited functions. At all stages of litigation, however—during claim construction, when making infringement allegations, and in jury instructions—MPT tried to read out these specific structures to make the accused products appear similar to its outdated patents.

1. MPT Attempted To Obtain Impermissibly Broad Claim Constructions Including Only The Most Minimal Of The Corresponding Structures

MPT asserted the claims-in-suit in prior cases, and all have been construed three times. Each time, MPT proposed constructions having minimal structure—essentially nothing more than the functions established in H.261—notwithstanding the crowded field and the need to provide detailed structure both to satisfy the statutory bargain of § 112, ¶ 6 and to distinguish the claims over prior art and competitors. Each time, the district court rebuffed MPT's attempts. A20076-

20136, A20139-48 (*DIRECTV*); A20010-24 (*Microsoft*); A20000-06 (*Gateway*); *MPT v. Microsoft Corp.*, No. 07-CV-0747, Dkt. No. 214 at 1-18 (S.D. Cal. July 23, 2008). In its August 17, 2012 *Markman* order here, the court similarly rejected this stratagem, including more structures than proposed by MPT but (generally) fewer structures than proposed by Defendants. A4-A73.

2. MPT Ignored Many Of The Court's Identified Corresponding Structures

After failing to obtain overly broad constructions, MPT's trial proofs simply ignored the structures it could not locate in the accused products. At trial, MPT's expert Dr. Richardson routinely opined that while the claimed and accused structures were different, the overall structure was somehow the same—but he did not offer any explanation of what the differences were, or how (or why) the overall structure was nonetheless equivalent. *See, e.g.*, A1597-98.

Dr. Richardson's omissions were understandable: He admittedly had not performed any analysis of the differences between the corresponding and accused structures. As just one example, he admitted that while there were differences between the '377 patent's corresponding structures and the accused structures, he had not actually analyzed what those differences were. A1720-22, A1749-51 (same regarding '878 patent, claim 13). Dr. Richardson went so far as to tell the jury that certain structures in the MPT patents were "superfluous," even though

they had been identified as corresponding structures by the court's claim construction. A1733; A1870-71.

3. MPT Tried To Use The Court's Jury Instructions To Prevent The Jury From Even Looking At The Corresponding Structures

Having failed to analyze the differences between the corresponding and accused structures, MPT sought and obtained an instruction ostensibly based on *Odetics, Inc. v. Storage Technology Corp.*, 185 F.3d 1259 (Fed. Cir. 1999), which it then tried to use to eliminate these differences.

When the court first issued its draft jury instructions, they included a means-plus-function instruction (based on the Federal Circuit Bar Association's model instructions, with no mention of *Odetics*), and the court informed the parties that they could file written objections. A20198-99. MPT objected and asked the court to include language from *Odetics* explaining that individual components are not claim limitations, that the claim limitation is the overall structure corresponding to the recited function, and that determination of structural equivalence does not require a component-by-component analysis. A10428-32.

In its next set of draft instructions, the court included the language MPT requested. A20299-20300. Then, and for its subsequent revisions, the court invited the parties to provide any objections. A2242-43; A2598; A2925, A2965.

Not surprisingly, MPT's objections included nothing about the revised means-plus-function instruction. A20236-51; A20335-40; A20342-44; A20346-49.

After Defendants' expert Dr. Bovik had completed his testimony, the court *sua sponte* amended the means-plus-function instruction to add the language to which MPT now objects, explaining that the amendment was tailored to both sides' trial presentations and followed Federal Circuit precedent. A3040-41 (citing *Toro Co. v. Deere & Co.*, 355 F.3d 1313 (Fed. Cir. 2004), and *Solomon Techs. v. ITC*, 524 F.3d 1310 (Fed. Cir. 2008)). Immediately thereafter, the court gave MPT another opportunity to object. MPT did not. A3042 ("[The Court:] Are there any other final comments on the jury instructions? . . . . ***MR. LORIG: No, your Honor***." (emphasis added)). In addition to not orally objecting, MPT filed no written objections to this additional language, despite the instructions not being read to the jury until four days later. A3350; A3382-85.

MPT's closing argument focused on the *Odetics* language instructing the jury that equivalence "does not require a component-by-component analysis," with MPT's counsel mentioning "overall" structure or equivalence more than thirty times. A3140, A3130-96; A3331. Defendants' closing argument similarly emphasized "overall structure, overall structure, overall structure." A3208.

The jury returned a verdict of non-infringement, which the district court upheld after denying MPT's post-trial motion for JMOL or a new trial. In that

motion, MPT expressly endorsed the instruction as given by the court. *E.g.*, A10738 (explaining that the instruction "required" an evaluation of "the overall similarities and differences between the structures of the claims and the source code structures in the accused devices"); *accord* A10751, A10776; A20477, A20490-91.

D. Summary Judgment On Apple's License Defense

Certain Apple accused products—Apple's computers and software applications used therein—did not go to trial for the '878 and '226 patents because the court granted summary judgment based on Apple's licenses with MPEG LA.

In 2002, Apple purchased MPEG LA's MPEG-2 Patent Portfolio License (the "2002 License"). The '878 and '226 patents are part of that portfolio. A201. The 2002 License granted Apple the right to make, use, and sell products that practice the MPEG-2 standard, identified as "MPEG-2 Decoding Product[s]" and "MPEG-2 Encoding Product[s]." A10343-90, §§ 2.2, 2.3. The License broadly defines these products as "[redacted] . . . primarily designed in whole or in part for" either "decoding video information in accordance with the MPEG-2 Standard" or "encoding video information into a format in compliance with the MPEG-2 Standard." A10347-48,

§§ 1.14, 1.17.[3] Under Section 6.1, the 2002 License was in effect until December 31, 2010, but Apple could renew it "for successive five year periods for the life of any MPEG-2 Patent Portfolio Patent, subject to reasonable amendment of the royalty terms and rates set forth in this sublicense." A10364.

On March 4, 2011, Apple and MPEG LA renewed the 2002 License (the "2011 Renewal"). A10128-95. Apple and MPEG LA used the modified form license that MPEG LA had created in the meantime, but made it "subject to the conditions, exclusions and clarifications" set forth in an Attachment.[4] A201; A207; A10391-93. The exclusions were significant: The Attachment's introduction explained that Apple did not "agree to . . . amendments to terms other than royalty terms and rates," and that such amendments would "not be applicable to Apple." A10391. The introduction also identified examples of what Apple considered amendments beyond royalty terms and rates; in Apple's view, the form license "includes additional amendments beyond amendments to royalty terms and rates, including but not limited to Sections 1.19, 1.22, 3.1.9, 4.10, 6.3.1, 7.1.2, 7.3, 7.18,

[3] None of the accused LG products contained MPEG-2 functionality, so the license defense was inapplicable to LG.

[4] Throughout its brief, MPT seeks to diminish the Attachment by calling it a "Side Letter." But the document expressly states that it is "an attachment . . . to the Renewal License as that term is used in Article 7.20.1 of the Renewal License." A10391. Article 7.20.1 provides that the "entire agreement between the parties" is contained in "[t]he provisions of this Agreement, including its attachments and any amendments." A10154-55.

and 7.19." A10391. In paragraphs 1 and 2 of the Attachment's body, Apple and MPEG LA "[redacted]" their understanding that, unless "expressly set forth" in the Attachment, any new terms that are not "royalty terms or rates," or amendments to such terms, were "void and unenforceable." A10392, ¶¶ 1-2. Instead, "the version of such terms that was set forth in the [2002] License will continue to apply unchanged." A10392, ¶ 2. Apple and MPEG LA both signed the Attachment. A10393.

The dispute on the parties' cross-motions for summary judgment was whether Section 2.7 of the form license—entitled "[redacted]"—is a "royalty term or rate," as MPT urged. If not, then it is "void and unenforceable" according to the Attachment, and the 2011 Renewal is a product license precluding MPT's claims against Apple for infringement of the '878 and '226 patents by accused products also incorporating MPEG-2 functionality.

The court agreed with Apple. It first concluded that the 2002 License was a product, not field-of-use, license—an issue MPT did not contest. A205-06; A20652. It then interpreted the Attachment as excluding any new terms or amendments in the form license other than amendments to royalty terms and rates. A207-10. Concluding that Section 2.7 was such an excluded provision, the court determined that the product scope of the 2002 License continued to apply to

Apple's 2011 Renewal, and granted summary judgment to Apple on the '878 and '226 patents for products incorporating MPEG-2 functionality. A210.

SUMMARY OF ARGUMENT

The fundamental problem with MPT's infringement allegations is that the asserted patents, claiming specific outdated video encoding and decoding implementations, do not cover the modern accused products, which practice a subsequent and radically different technology. The jury recognized this, returning a verdict of non-infringement. Faced with its jury failures, MPT's appeal instead challenges a jury instruction, claim constructions, and a contract-interpretation issue decided on summary judgment.

In pursuing those arguments, MPT ignores or, in several instances, flatly mischaracterizes matters unhelpful to its cause. Regarding the challenged jury instruction, MPT seeks to obscure the fact that it failed to object. That issue is therefore waived. Moreover, the district court's comprehensive instruction was a correct statement of the law. MPT argues that the court should have instructed the jury solely to consider "overall structure"—with no reference to the role that individual components can play in that analysis—even though this Court's case law and common sense plainly dictate that consideration of differences between individual components in the accused and corresponding structures may inform differences in overall structure. The court's instruction correctly stated that law.

To challenge claim constructions, though, MPT switches tactics, this time diminishing the overall structures corresponding to the recited functions to a too-limited number of individual components. MPT seeks to include only generic or final components in order to read the claims expansively as covering the basic functions performed by the barest amount of corresponding structure—a transparent effort to capture modern technology with outdated patents. In rejecting MPT's constructions, the court properly recognized that a number of interrelated components were necessary to perform the recited functions.

Finally, in disputing summary judgment on Apple's license defense, MPT asks the Court to accept that a term in the MPEG LA form license that sought to transform its basic licensing structure from product licenses to field-of-use licenses was nonetheless a "royalty term," the only sort of term and amendment Apple accepted upon renewing its license. The court properly rejected MPT's improbable reading and concluded that Apple's licenses with MPEG LA are product licenses, thus precluding licensed MPEG-2 products from infringing two of the patents-in-suit.

No further proceedings are warranted. The judgment should be affirmed.

STANDARDS OF REVIEW

To challenge a jury instruction on appeal, the party must timely object, and "stat[e] distinctly the matter objected to and the grounds for the objection." Fed.

R. Civ. P. 51(c)(1), (d)(1). For instructions modified after the charge conference, the party must "object[] promptly after learning that the instruction or request will be, or has been, given or refused." *Id.* at 51(c)(2)(B).

This Court reviews an objected-to instruction on an issue of patent law *de novo*. *Sulzer Textil A.G. v. Picanol N.V.*, 358 F.3d 1356, 1363 (Fed. Cir. 2004). The Court determines whether there has been error in light of the instructions in their entirety. *See Biodex Corp. v. Loredan Biomedical, Inc.*, 946 F.2d 850, 854 (Fed. Cir. 1991). If the instruction was erroneous, the Court determines whether the error is prejudicial, which exists only "if the outcome of the case would have been different had the correct instruction been given." *Sulzer*, 358 F.3d at 1367. If there was no proper objection, however, the Court may review only for plain error. Fed. R. Civ. P. 51(d)(2).

The remaining issues on appeal are reviewed *de novo*. *Cybor Corp. v. FAS Techs. Inc*., 138 F.3d 1448, 1454 (Fed. Cir. 1998) (en banc) (claim construction)[5]; *Riggs v. Prober & Raphael*, 681 F.3d 1097, 1102 (9th Cir. 2012) (summary judgment).

[5] By the time this case is heard, an en banc decision in *Lighting Ballast Control LLC v. Philips Electronics North America*, No. 2012-1014(L), may have issued, which may change the standard of review. Defendants submit that, if any court's claim construction is due deference, it is the district court's here, after hearings in three different cases to construe the asserted claims. *Cf. Finisar Corp. v. DIRECTV Grp., Inc.*, 523 F.3d 1323, 1329 (Fed. Cir. 2008).

ARGUMENT

I. MPT WAIVED ITS CHALLENGE TO THE MEANS-PLUS-FUNCTION INSTRUCTION BY FAILING TO TIMELY OBJECT; MOREOVER, THE INSTRUCTION CORRECTLY STATED THE LAW

The district court correctly instructed the jury on assessing means-plus-function structural equivalence. But it is unnecessary for this Court to reach that issue, because MPT failed to timely object. Until this appeal, MPT never challenged the language it now disputes, even though the court repeatedly invited objections. In fact, until this appeal, MPT *lauded* the instruction as given. MPT's appellate argument is waived.

In any event, the instruction correctly stated the law, and would not have yielded a different result even if it had been incorrect, because, as the court recognized, MPT failed to prove infringement.

A. MPT Waived This Argument

As noted above (pp. 12-13), MPT never objected to the language it now challenges. Indeed, in its initial objections, MPT asked the court to include certain language from *Odetics*, A10428-32, and in its next set of draft instructions, the court included exactly what MPT requested. A20299-300; A2242.

Thereafter, MPT lodged no further objections to what became jury instruction no. 26, despite repeated invitations from the court to do so. *See, e.g.*, A2242-43; A2598; A2925, A2965. In fact, when the court modified that

instruction to include the language at issue, it again asked whether the parties had any objections. A3040-42 ("Are there any other final comments on the jury instructions?"). MPT's counsel plainly stated, "No, your Honor." A3042. Even after that hearing, MPT had abundant time to object—four days—before the court read the instructions to the jury. A3350, A3382-85. MPT never did.

Apparently recognizing this threshold problem with its newly-crafted appellate argument, MPT asserts—without record citation—that when the court modified instruction no. 26, it "announced that it would not consider any further objections" to that instruction. (MPT-Br. 10.) The record contains no such "announcement." A3040-42.

And, lest there be any doubt on MPT's position below, it expressly *endorsed* the court's modified instruction. In its post-trial papers, MPT repeatedly explained that the instruction "required" an evaluation of "the overall similarities and differences" and that "a component-by-component analysis" would be "counter" to the instruction. A10738, A10751, A10765-66; *accord* A10776 (similar); A20477 (similar); A20490 (posing no challenge to the portion of the instruction "addressed to a situation where a different or missing component 'plays a central role in the identified structure'"). MPT has waived appellate challenge.[6]

[6] MPT has not argued that an objection would have been futile, and its reply brief would be too late for such an argument. *See SmithKline Beecham Corp. v.*

B. The Instruction Correctly Stated The Law

In all events, the instruction was correct.[7] MPT claims as error the second paragraph in the following excerpt from instruction no. 26:

> A determination of structural equivalence does not require a component-by-component analysis of the structure corresponding to the claim function. The individual components, if any, of an ***overall structure*** that corresponds to the claim function are not claim limitations, rather, the claim limitation is the ***overall structure*** corresponding to the claim function. This is why structures with different numbers of parts may still be equivalent, thereby meeting the claim limitations.
>
> However, differences between the components in the structure I have identified and the components in the structure in the products can be considered if the differences are such that it renders the ***overall structure*** in the products substantially different from the ***overall structure*** I have identified. In particular, where the different and/or missing component is a component that plays a central role in the ***identified structure***.

(continued…)

Apotex Corp., 439 F.3d 1312, 1319 (Fed. Cir. 2006) ("arguments not raised in the opening brief are waived"). Given the court's repeated invitations for objections, such an argument would not work anyway.

[7] Because MPT failed to object, plain-error review would apply, *see* Fed. R. Civ. P. 51(d)(2), but MPT has not even attempted to make such a showing. As with futility, *supra* at 21 n.6, MPT's reply brief would be too late to argue plain error. *See United States v. Murinko*, 410 F. App'x 2, 5 (9th Cir. 2010) ("As a threshold matter, Murinko failed to address the plain error requirement in his briefing and has, therefore, abandoned the argument."). In any event, for the reasons described below, MPT cannot establish any error, much less prejudicial error or plain error.

A3384-85 (emphasis added); *see* MPT-Br. 19.[8] At its heart, MPT's challenge posits that "the district court departed from *Odetics* by instructing the jury to focus on components of the claimed structure, rather than on the overall structure." (MPT-Br. 27.) But the court did exactly what MPT argues should have been done. Consistent with *Odetics*, but contrary to MPT's characterization, the instruction kept the jury's focus on "overall structure," and did not "encourage[]," "credit[]," or "require" an improper component-by-component analysis. (*See* MPT-Br. 10, 20, 22.) As the emphasized language shows, this excerpt alone commanded the jury *five times* to evaluate the overall structure.[9] MPT never addresses that fact. MPT also ignores the language instructing that a component-by-component analysis is "not require[d]." A3384. The court could not have "require[d]" a component-by-component analysis by commanding the jury that such an analysis is "not require[d]."

MPT urges that *Odetics* absolutely precludes *considering* individual components of an overall structure. But *Odetics* holds no such thing. The only reasonable way to analyze an accused product's overall structure is to examine the constituent components to determine whether they (as a group) substantially differ

[8] The entirety of the instruction is set forth at A20396-98.

[9] MPT inaccurately quotes the instruction and omits the fourth reference to "overall structure." (MPT-Br. 19.)

from the corresponding structure. Thus, the instruction is not erroneous, but squarely in accord with this Court's case law, which permits consideration of individual components and their differences in order to assess differences in "overall structure."

Under 35 U.S.C. § 112, ¶ 6, structural equivalence is established if the structures identified in the specification as corresponding to the recited function and the structures in the accused device perform the recited function in substantially the same way to accomplish the same result. *See Odetics*, 185 F.3d at 1267. Put another way, structural equivalence exists if the differences in overall structure are insubstantial. *See Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc.*, 145 F.3d 1303, 1308 (Fed. Cir. 1998).

The centrality of a component can be relevant to whether its differences contribute to making the overall structure substantially different. As this Court explained in *Toro Co. v. Deere & Co.*, 355 F.3d 1313, 1324 (Fed. Cir. 2004), where the "cam was not simply a minor component of" the corresponding structure, but was instead "indispensible," it was appropriate to give that structure greater weight in considering the overall structure's equivalence. In *Solomon Technologies v. ITC*, 524 F.3d 1310, 1317 (Fed. Cir. 2008), this Court elaborated on *Toro*, explaining that it "allows for greater weight to be given to individual components that play a central role in the identified structure." There, because the

transaxles in the accused vehicles used rotor shafts rather than disks, which "play[ed] a central role in the 'power conversion means,'" the Court found no error in the determination of lack of structural equivalence. *Id.* at 1317-18. Other case law is in accord.[10]

MPT misstates the standard under *Odetics* and *Caterpillar Inc. v. Deere & Co.*, 224 F.3d 1374 (Fed. Cir. 2000). (MPT-Br. 17-19.) Those cases do not preclude consideration of whether a component plays a central role in performing the recited function to inform the equivalence inquiry. For one, MPT can only infer that the missing components in *Caterpillar* and *Odetics* "*appeared to* play a central role"—the issue was not addressed in either decision. (MPT-Br. 18.) For

[10] *See, e.g.*, *Frank's Casing Crew & Rental Tools, Inc. v. Weatherford Int'l, Inc.*, 389 F.3d 1370, 1372, 1378-79 (Fed. Cir. 2004) (affirming summary judgment of non-infringement where the corresponding structure included a cylinder, a boom, and "a lift plate located under the boom," with the latter "not present in the" accused device); *NOMOS Corp. v. BrainLAB USA, Inc.*, 357 F.3d 1364, 1369 (Fed. Cir. 2004) (affirming summary judgment of non-infringement where the corresponding structure included a probe with a fixation device whereas the accused device contained a different component, a handheld probe); *Kemco Sales, Inc. v. Control Papers Co.*, 208 F.3d 1352, 1354, 1364-65 (Fed. Cir. 2000) (focusing on "flap" component of the corresponding structure, rather than envelope openings, to distinguish the "dual-lip" of the accused device and affirm summary judgment of non-infringement); *Mas-Hamilton Grp. v. LaGard, Inc.*, 156 F.3d 1206, 1212-13 (Fed. Cir. 1998) (in affirming judgment of non-infringement, focusing on solenoid component of the corresponding structure, rather than the "spherical detent 96, solenoid housing 62, boss 92, and pin 54," to distinguish the "stepper motor" of the accused device because "the two provide power to the lever to operate the lock" in substantially different ways for purposes of the "lever operating means").

another, this Court did not reverse those non-infringement judgments because the district courts ***considered*** whether a component was central to the recited function, but because the courts ***required*** component-by-component equivalence instead of evaluating equivalence of "overall structure." *See Odetics*, 185 F.3d at 1268 (district court believed it was required to perform component-by-component analysis to determine structural equivalency and improperly granted JMOL because certain components differed); *Caterpillar*, 224 F.3d at 1380 (district court improperly relied merely on the absence of certain components in the accused devices and the different "number and size of parts involved," even though "considerable evidence" showed that the accused devices' overall structure "performed the same function in substantially the same way to achieve substantially the same result as the corresponding structure").

Moreover, there is no disagreement between those cases on the one hand, and *Toro* and *Solomon* on the other, nor did the district court interpret *Toro* and *Solomon* as "modifying" *Odetics*.[11] (MPT-Br. 10, 17-22 & n.8.) The decisions are

[11] MPT's supposed distinctions of *Toro* and *Solomon* (MPT-Br. 21-22) are inapt. To uphold the non-infringement judgment, *Toro* did not rely merely on the district court's statement that it did not apply a component-by-component analysis; the Court further stated that the "cam was not simply a minor component." 355 F.3d at 1324. And *Solomon* was not solely a prosecution-history estoppel case. Only after establishing the appropriateness of considering whether individual components played a central role did the Court examine the prosecution history—and then only to assess whether the component could be deemed to "play a central

all founded on the principle that the fact finder should focus on "overall structure," and not a "component-by-component" comparison, because the individual components are not themselves claim limitations. A3040-41.

The court's instruction followed this principle. The disputed language commanded the jury to evaluate "***the overall structure*** in the products," even when considering, as *Toro* and *Solomon* allow in appropriate cases, "differences between components." A3384-85 (emphasis added). There was no error.

C. Any Error In The Instruction Would Be Harmless Because MPT Failed To Show Infringement

Even were there instructional error—and there is not—it cannot affect the result here. There would be no prejudice in view of MPT's failure to prove essential elements of its infringement claims.

To start, MPT failed to prove or even allege the presence of many of the recited *functions*. That renders *structural* equivalence, including the challenged instruction, entirely irrelevant. For claims 13 and 31 of the '878 patent, MPT's Dr. Richardson provided no testimony about the motion-compensation-type signal, which was part of the recited function as construed by the court (and not

(continued…)

role." 524 F.3d at 1317. MPT also contends that *Solomon* and *Toro* "do not discuss *Odetics*." (MPT-Br. 20.) *Solomon* and *Toro* clearly discuss the same "overall structure" principle; *Solomon* even cites *Odetics* as well as *Toro*. *See* 524 F.3d at 1317.

challenged by MPT here). *E.g.*, A2801 (Dr. Bovik informing the jury that Dr. Richardson had not identified any motion-compensation-type signal, part of the recited function of '878 patent, claim 13); A2748-49. Defendants also pointed this out in opposing MPT's post-trial motion (A20444-47; A224), but MPT's opening brief nowhere addresses this failure.

MPT instead asserts, without explanation, that its proof of equivalent overall structure was "overwhelming." (MPT-Br. 26 (citing limited portions of Dr. Richardson's testimony).) The record does not support this bare attorney argument. MPT's evidence was completely bereft of proof of structural equivalence under any standard. Indeed, Dr. Richardson did not analyze the differences between the corresponding and accused structures: "I don't recall carrying out an analysis of differences." A1722, A1749-51; *see also* A2656 (Dr. Bovik's testimony regarding Dr. Richardson's admission); A221; A223-31. Moreover, Dr. Richardson admitted that there were "fundamental" and "substantial" differences between the DCT structure in the patents and the integer transform structure in the H.264 technology of the accused products—differences impacting overall speed and accuracy that his own book (shown below, published to the jury at A1796-97) called "fundamental differences." A1793-94, A1801-02.

6.4.8.1 4 × 4 Residual Transform and Quantisation (blocks 0–15, 18–25)

This transform operates on 4 × 4 blocks of residual data (labelled 0–15 and 18–25 in Figure 6.37) after motion-compensated prediction or Intra prediction. The H.264 transform [3] is based on the DCT but with some fundamental differences:

1. It is an integer transform (all operations can be carried out using integer arithmetic, without loss of decoding accuracy).
2. It is possible to ensure zero mismatch between encoder and decoder inverse transforms (using integer arithmetic).
3. The core part of the transform can be implemented using only additions and shifts.
4. A scaling multiplication (part of the transform) is integrated into the quantiser, reducing the total number of multiplications.

Given MPT's failures of proof, consideration of Dr. Bovik's testimony is unnecessary. (*See* MPT-Br. 23-28.) Nonetheless, it, too, did not prejudice MPT. MPT suggests that Dr. Bovik somehow took advantage of the court's modified instruction (MPT-Br. 27-28), but he could not have done so: The court did not inform the parties of its additional language—added *sua sponte*, as MPT acknowledges (MPT-Br. 20)—until *after* Dr. Bovik finished testifying.. A3040-42; *see also* A2989 (Dr. Bovik being excused).

In any event, Dr. Bovik's testimony focused on overall structure, not on an improper component-by-component analysis. He repeatedly stated that his methodology for analyzing equivalence was to evaluate overall structure. A2645-75; A2709-17, A2730-51, A2767-83, A2801-02, A2810-12, A2926; A2987-88, A3205-07, A3216-18; *see also* A220; A225; A229-30 (court's post-trial ruling that Dr. Bovik explained why different or missing components in the accused products made their overall structure non-equivalent to the corresponding structure). And

while MPT argues that Dr. Bovik's and Mr. Overby's analyses of source code concerned only five specific issues (MPT-Br. 25-26), MPT ignores that this analysis was only Defendants' initial review of the code; thereafter, MPT's Dr. Richardson disclosed all of the corresponding structures he addressed, and Defendants' experts refuted ***all*** of them at trial. A2652-53, A2512-15 (Mr. Overby: "I did take special care to make sure that I had looked at everything that [Dr. Richardson] presented in his direct.").

Nor did Defendants' closing argument prejudice MPT. (MPT-Br. 28.) Consistent with Dr. Bovik's testimony, Defendants' counsel repeatedly emphasized "[o]verall structure, overall structure, overall structure." A3208. There can be no prejudice from emphasizing precisely what MPT wanted (and, as Defendants have shown, what the instruction actually said).[12]

Finally, MPT suggests that it "asked the court to correct its error by granting MPT JMOL" (MPT-Br. 27), but the reason it offers this statement is at best unclear. If it is offered to suggest that MPT preserved its objection for appeal, then that would be incorrect. A post-trial JMOL motion does not satisfy the "at the opportunity provided" or "promptly" requirements of Rule 51(c)(2)(A) & (B). Moreover, MPT's JMOL motion itself enthusiastically endorsed that instruction

[12] Besides, the court instructed the jury that "[a]rguments and statements by lawyers are not evidence" and that "[w]hat they have said in their opening statements, closing arguments and at other times . . . is not evidence." A3351.

(A10751; A20477, A20490-91), and never suggested that it was error. In any event, the court correctly denied MPT's JMOL request because of the same failures of proof detailed above. Any (supposed) error in the jury instruction was accordingly harmless and provides no basis for a new trial.

II. THE DISTRICT COURT'S CLAIM CONSTRUCTIONS CORRECTLY DECLINED TO INCLUDE ONLY HIGH-LEVEL STRUCTURES PRESENT IN THE PRIOR ART, AND CORRECTLY INCLUDED THE SPECIFIC CORRESPONDING STRUCTURES NECESSARY TO PERFORM THE RECITED FUNCTIONS

Ironically, while MPT's principal appellate argument focuses on overall structure, MPT takes the opposite tack in challenging the district court's claim construction. For nearly every construction it challenges on appeal, MPT argues either that certain components do not participate in the final step of performing the recited function, and therefore cannot be part of the corresponding structure, or that these components do not perform 100% of the function by themselves, and thus cannot be "*the*" corresponding structure. (*E.g.*, MPT-Br. 50 (arguing that components the court included do not "perform any motion compensated decoding ***itself***, and for that reason should not be part of the corresponding structure" (emphasis added)).)

Section 112, ¶ 6 is a statutory bargain. It allows functional claiming, but requires a disclosure of the particular structure(s) corresponding to that function. *See, e.g.*, *Biomedino, LLC v. Waters Techs. Corp.*, 490 F.3d 946, 948 (Fed. Cir.

2007). A component need not perform all of the recited function—by itself—to be included in the corresponding structure. MPT acknowledges this principle when generally explaining why claim 13 of the '878 patent should include many interrelated structures. In challenging the court's determination that certain components were ***not*** linked to the recited function, MPT correctly notes that claim 13's corresponding structure is not limited to only those components that are "'responsive to the motion compensation type signal.' All that claim 13 requires is that the ***overall*** means be so responsive." (MPT-Br. 48 n.21 (emphasis added).)

That correct statement of law is ignored throughout MPT's other claim-construction arguments, where MPT takes an impermissibly narrow view of what is "necessary" structure and an impermissibly broad view of what is merely "enabling." MPT consistently treats structural components it wants to eliminate as akin to the merely enabling electrical outlet for the hypothetical toaster in *Asyst Technologies Inc. v. Empak, Inc.*, 268 F.3d 1364 (Fed. Cir. 2001). There, this Court explained that "[a]n electrical outlet enables a toaster to work, but the outlet is not for that reason considered part of the toaster." *Id.* at 1371. Relying on this analogy, *Asyst* held that a communication line was not a part of the corresponding structure for certain recited functions because it "merely enable[d] the pertinent structure to operate as intended." *Id.* Notably, however, *Asyst* elsewhere recognized that the communication line was part of the corresponding structure for

other recited functions ("controlling activities on the workstation and transmitting information to the transportable container") because the means for performing those functions "necessarily encompasses structure that connects the two, *i.e.*, communication line 51," in order to "control[]" the workstation and "transmit information." *Id.* at 1372.

Moreover, MPT ignores that, "[w]hile corresponding structure need not include all things necessary to enable the claimed invention to work, it must include all structure that actually performs the recited function." *Default Proof Credit Card Sys., Inc. v. Home Depot U.S.A., Inc*., 412 F.3d 1291, 1298 (Fed. Cir. 2005). "This duty to link or associate structure to function is the quid pro quo for the convenience of employing § 112, ¶ 6." *B. Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424 (Fed. Cir. 1997).

Here, if anything could be treated as merely enabling, it would be the dozens of other components the court ***did not*** include as corresponding structure. A74-A199. Rather than include those components, the court carefully identified only the interrelated components necessary for performing the recited functions. In this way, the court's construction comported with *Gemstar TV Guide International, Inc. v. ITC*, 383 F.3d 1352, 1362 (Fed. Cir. 2004), which distinguished *Asyst*'s exclusion of the "communication line 51" for certain functions. As *Gemstar* recognized, where, by contrast, various interrelated components work together to

perform the recited function, they are necessary structures, even if none of them, individually, performs the function:

> [T]he written description indicates that the combination of a CPU, video display generator, and video switcher is required to perform the function of displaying the television schedule in a grid format on the television screen. Without the transmission of electrical signals by the video display generator to enable the video switcher, the television schedule would not be selectively displayed on the television screen and would not be displayed in grid format, as are required by the functional statement of the claim limitation.

Id.

The district court devoted considerable effort to claim construction, construing each patent three times. A4-199; *supra* at 10-11. MPT's arguments have been repeatedly rejected. Once more, attempting to avoid the statutory bargain of §112, ¶ 6 claiming, MPT seeks to read out the specific structures the inventors disclosed to the public. MPT's arguments should be rejected, and the court's constructions affirmed.

A. The District Court Correctly Construed Claim 1 Of The '377 Patent

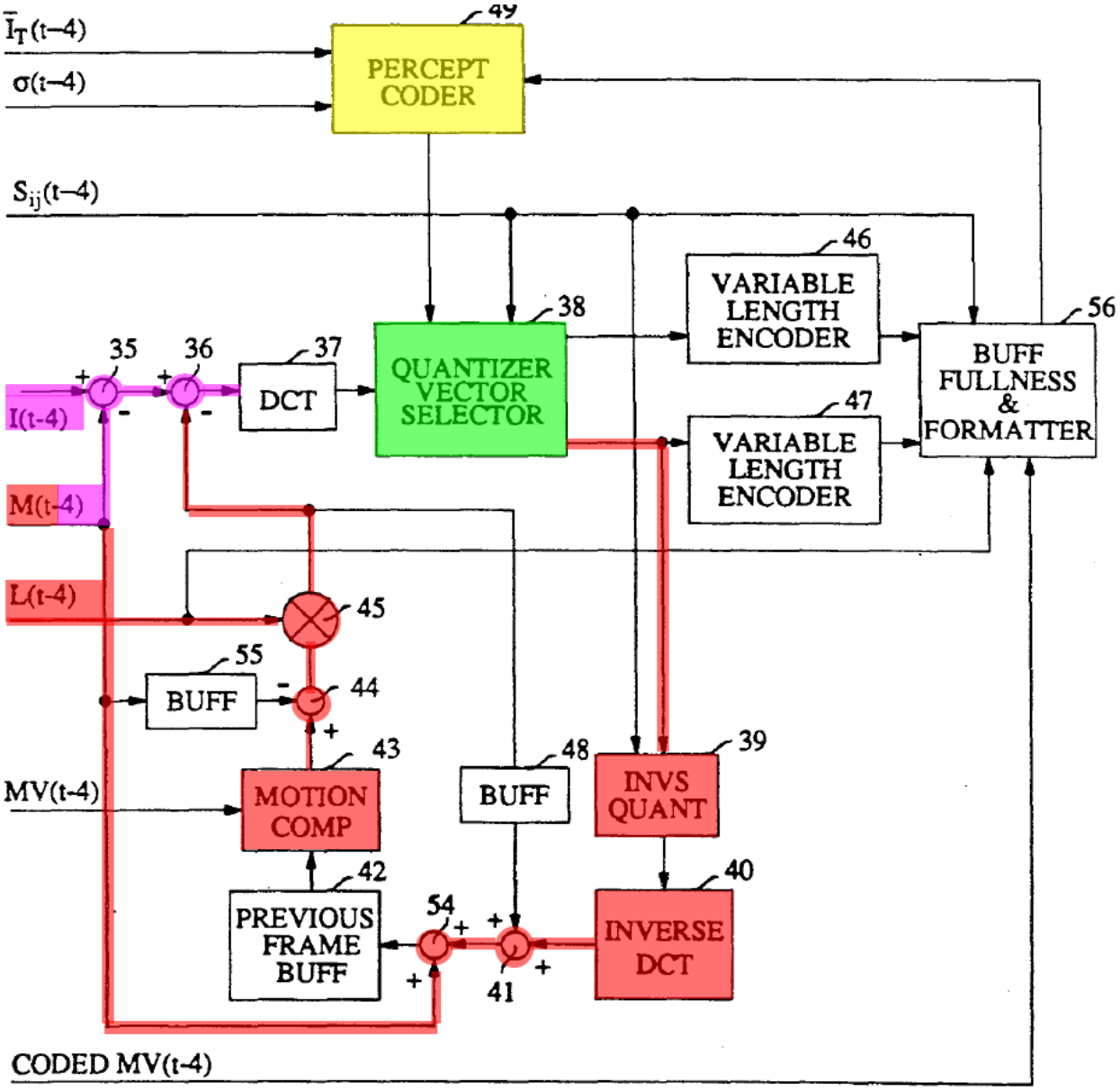
Claim 1 of the '377 patent recites:

> An encoder including a coder for developing encoder output signals from frame difference signals*, prediction means responsive to said encoder output signals for predicting a next frame's signals*, and *means for developing said frame difference signals from applied next frame signals of an image frame and from output signals of said prediction means*, the improvement comprising:

> said coder including *controller quantizer means* that quantizes said difference signals in accordance with a quantization schema that varies with the dictates of a control signal; and
>
> said coder including means, responsive to said applied next frame signals, to develop said control signal, which control signal varies throughout said applied next frame with changes in at least one selected characteristic of said applied next frame signals.

A349:25:35-51 (emphasis added). This claim generally describes an encoding process consisting of leaky prediction, vector quantization, and perceptual coding (coding to eliminate data that the human eye cannot perceive) with feedback for controlling vector quantization. A2722:18-A2730:23. The structures for the patented encoding process (including pertinent inputs, outputs, and interconnections[13]) are depicted in Figure 2 below, with "prediction means" in red, "means for developing said frame difference signals" in purple, "controllable quantizer means" in green, and "means, . . . to develop said control signal" in yellow:

[13] In its graphics, reproduced below, the district court did not highlight inputs, outputs, or interconnections that are corresponding structure. Given MPT's arguments on appeal, Defendants highlight pertinent ones here.



As the Figure shows, the full encoding process of claim 1 (setting aside many of the buffers that operate to synchronize the various operations) is as follows:

- The input signal of the current frame (*i.e.*, the "applied next frame signal") I(t-4) enters subtracter 35, where the frame mean signal, M(t-4), is subtracted.

- Subtracter 35 then relays that frame-mean modified image to subtracter 36, where the predicted image of I(t-4) is subtracted.

- This resulting frame difference signal (*i.e.*, the difference between I(t-4) and the predicted image) is fed to discrete cosine transform ("DCT") 37, where the frame difference signal is transformed into a set of frequency coefficients.

- Those frequency coefficients are then quantized in quantization vector selector ("QVS") 38 in accordance with the vector quantization schema of Figures 9 and 10.

- QVS 38 outputs quantized frequency coefficients for the applied next frame's signal that then proceed to both (1) variable length encoder 46 (*i.e.*, entropy coding), which is then provided for transmission, and (2) the motion-compensation step, first through inverse quantizer 39.

- Perceptual coder 49 provides a control signal to QVS 38 and inverse quantizer 39 to help maintain a suitable bit rate (*i.e.*, amount of data to transmit).

- For predicting a next frame's signals (*e.g.*, motion-compensation), the encoder output signals proceed along the following path:

    - Inverse quantizer 39 and inverse DCT 40 roughly reverse the actions taken by DCT 37 and QVS 38 to yield a signal approximating the output of subtracter 36.

    - Adder 54 adds the frame-mean signal.

    - Buffer 42 delays the signal to create an approximation of the (now) previous frame, I(t-5).

    - Motion vectors MV(t-4) are applied to I(t-5) in motion compensator 43 to arrive at the motion-compensated image I(t-4).

    - Subtracter 44 subtracts the frame mean to essentially reverse the actions of adder 54.

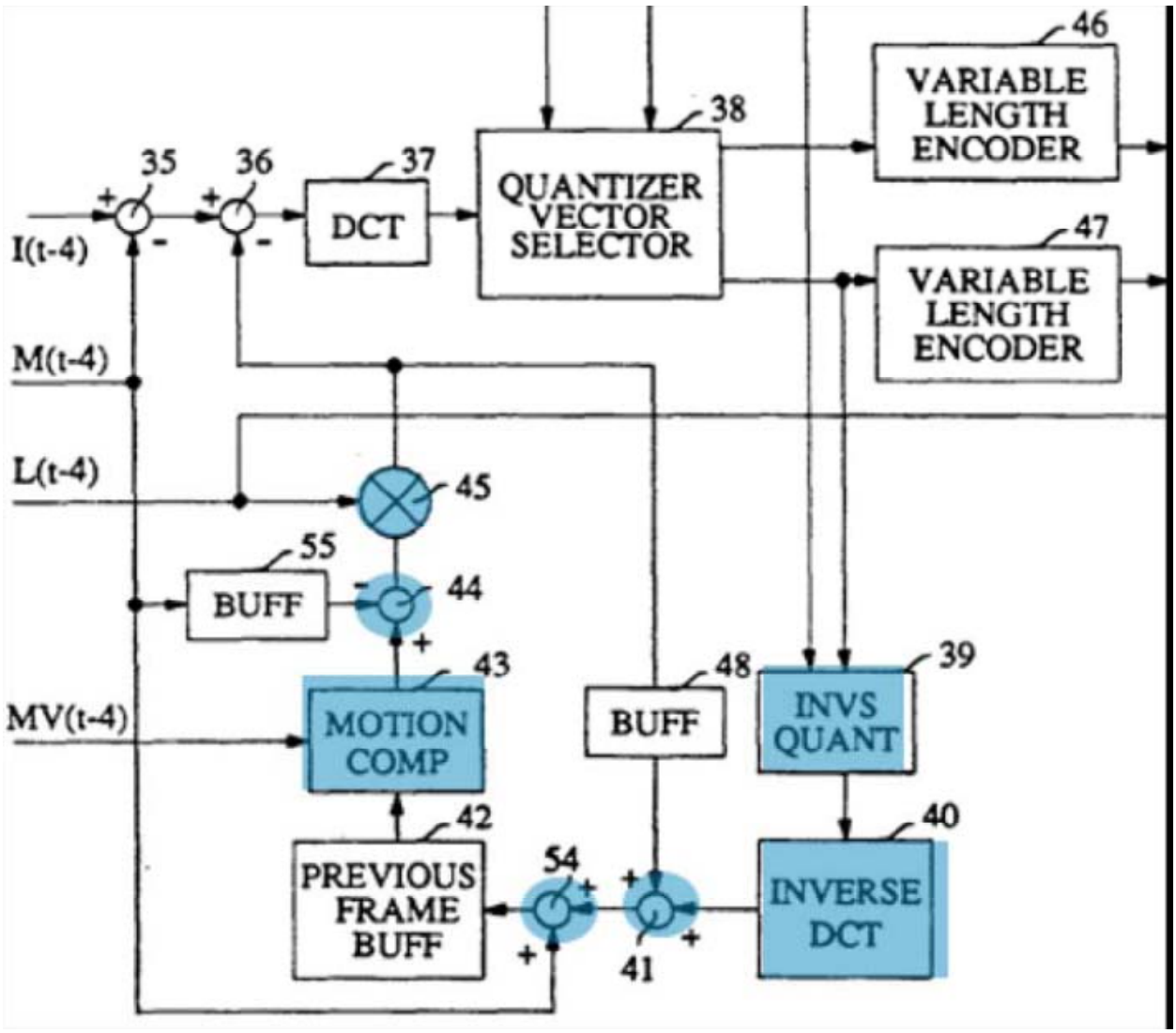
- Multiplier 45 finalizes the leaky prediction by multiplying the output of subtracter 44 by a leak factor, which allows historical information to be maintained and noise to be diminished.

- The leaky predicted signal output from multiplier 45 proceeds to the negative input of subtracter 36.

A339:5:60-6:39, A340:7:12-15, A343:13:19-14:16, A343:14:64-A345:18:17.

1. The "Prediction Means Responsive To Said Encoder Output Signals For Predicting A Next Frame's Signals" Includes The Structures For Leaky Prediction And Frame Mean Subtraction That Were Critical To The Invention

MPT challenges the court's "prediction means" construction. (MPT-Br. 31-34.) The recited function is "predicting a next frame's signals." A46. As the court held, claim 1 makes clear that the prediction means takes the encoder output signals, which the parties agree is the signal output from quantizer vector selector 38, as input and produces an input to the difference means (which the parties agree contains subtracter 36). (*See* MPT-Br. 35-36.) The court correctly held that the various components in the loop between QVS 38 and subtracter 36 ***together*** perform this function. A46-47; A339:5:60-6:39.



Reproduced above, the court highlighted the corresponding structures. A48. MPT does not dispute inclusion of motion compensator 43, adder 41, inverse DCT 40, and inverse quantizer 39, but challenges inclusion of adder 54, subtracter 44, and multiplier 45. (MPT-Br. 31-32.) MPT provides no real explanation for why some of these structures in the loop between QVS 38 and subtracter 36 are "necessary" while others are merely "enabling," but given that the inventors admitted that the industry never adopted usage of leaky prediction or a frame mean

(A1302; A2408, A2411), the clear effect of MPT's position is to exclude structures that are undisputedly not present in the accused products.

MPT asserts that the leak factor and multiplier 45 would not be part of the prediction means. (MPT-Br. 33-34.) MPT is incorrect. Leaky prediction (as its name demonstrates) is a type of prediction, and the leak factor, via multiplier 45, assists leaky prediction. A343:14:3-16 ("When there is a scene change, the two σ signals will not differ much because the frame will have a ***poor prediction*** . . . . In such a case (i.e., when the two σ signals differ by more than a chosen threshold), it is clear that a leak of 1 (***no prediction***) is to be selected . . . . ") (emphasis added). The leak factor is clearly linked with predicting the next frame's signals, in that it is adjusted to help formulate prediction based on the similarity of two consecutive frames. A343:14:3-16 (describing this adjustment). Indeed, the inventors and experts consistently referred to "leaky ***prediction***" when discussing how the leak factor is used in the patent and in the encoder embodying the patent that the inventors built, and they distinguished "leaky prediction" from "perfect prediction" that does not use a leak factor. A1269-70; A1293; A2390-91; A4008.

MPT also argues that adder 54 and subtracter 44 "can be removed entirely" and thus cannot be corresponding structure. (MPT-Br. 33.) Wrong. Just because the patent notes "in passing" limited circumstances where they are superfluous ("when the action of buffer 42 is linear") does not mean that they are unnecessary

for performing the function of "predicting the next frame's signals." A339:6:40-44. MPT's argument is akin to saying a telephone's speaker is not necessary structure because the user might sometimes push the "mute" button.

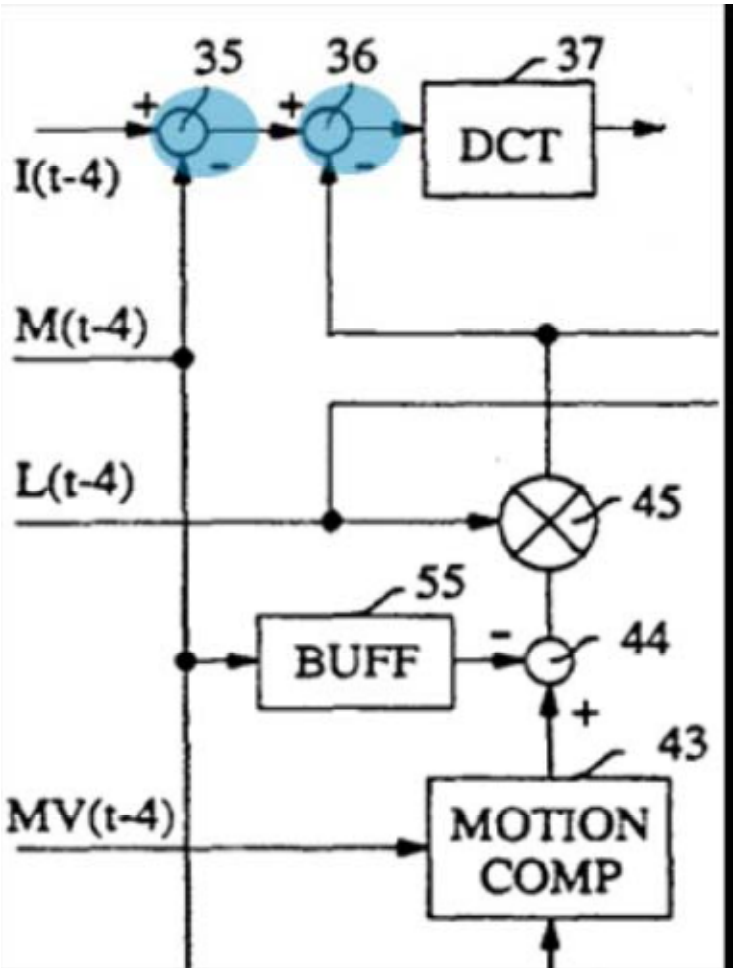
MPT also wrongly asserts the court "equat[ed]" the prediction means with the entire encoding loop. (MPT-Br. 32-33.) That is untrue: The court did not include all of the components in the encoding loop (such as subtracter 36, DCT 37, QVS 38, or buffers 42, 48, or 55), but instead carefully selected only the structures clearly linked to prediction.

Finally, MPT argues that the court erred in including all inputs, outputs, and interconnections necessary to the recited function. (MPT-Br. 33, 34 n.14.) As an initial matter, this argument has been waived as to interconnections: At the claim-construction hearing, MPT's counsel agreed that interconnections should be included: "[W]e would agree the interconnections should be included but not the inputs and outputs." A20532. In any event, the court properly included them because they, just like *Asyst*'s "connection line," are necessary to connect the specific components that make up the complex structure that performs the recited function. 268 F.3d at 1372. As for inclusion of the inputs and outputs, those are explicitly recited in the claim language—the "encoder output signals" and the signal input into the "means for developing frame difference signals." A349:25:36-39; *see also Gemstar*, 383 F.3d at 1363 ("A careful examination of the

claim language and the recited function provides guidance as to what the corresponding structure of a claim should encompass."); *Smiths Indus. Med. Sys., Inc. v. Vital Signs, Inc*., 183 F.3d 1347, 1357-58 (Fed. Cir. 1999) (relying on the express terms of the limitation to identify corresponding structure).

2. The "Means For Developing Said Frame Difference Signals . . ." Includes Both Subtracters 35 And 36 As Well As Inputs, Outputs, And Interconnections

MPT next challenges the district court's "frame difference means" construction. The recited function is "developing the frame difference signals mentioned earlier in the claim from applied next frame signals of an image frame and from output signals of said prediction means." A48. This function creates a frame difference signal (*i.e.*, the difference between "applied next frame signal" I(t-4) and its estimate) that is then fed to DCT 37. The court held that the structures associated with this function are subtracters 35 and 36 as well as the inputs, outputs, and interconnections of these components necessary to the recited function. A48-49 (graphic reproduced below).



MPT agrees that subtracter 36 is required structure but contends that subtracter 35 and the inputs, outputs, and interconnections are not. (MPT-Br. 35.) This argument ignores the claim's function of "developing" frame difference signals. A349:25:39. The specification plainly describes frame difference signals as "the difference between the image I(t-4) and the best estimate of image I(t-4)." A339:5:65-6:6. Thus, it is critical to include the structure for subtracting I(t-4) and the estimate of image I(t-4). I(t-4) is input into ***subtracter 35, not subtracter 36***, while the estimate of image I(t-4) is input into subtracter 36, not subtracter 35.

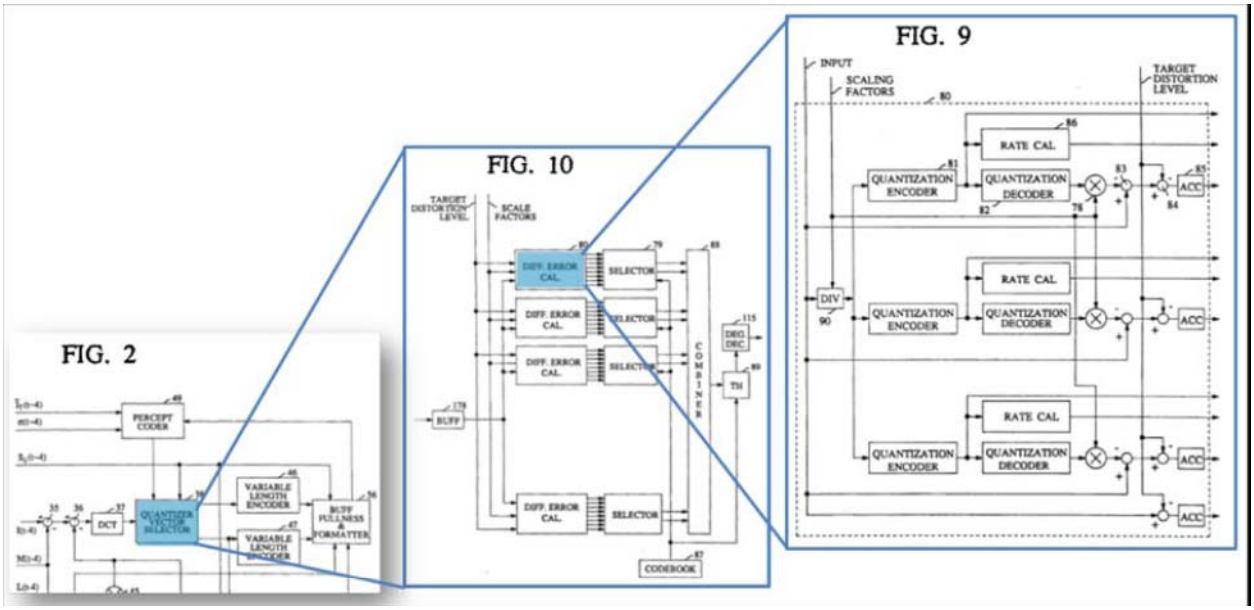
A339:5:63-6:3 ("I(t-4) is applied to subtracter 36 after the frame-mean signal M(t-4) is subtracted from it ***in subtracter 35***." (emphasis added)). Subtracters 35 and 36, working in conjunction, then "develop" the frame difference signals. Moreover, the frame mean must be subtracted in subtracter 35, so that the subtraction that takes place in subtracter 36 is an apples-from-apples operation (as MPT concedes, the input into subtracter 36 from the prediction means has been adjusted by a frame mean). (MPT-Br. 35-36.)

As with the "prediction means," MPT's effort to exclude inputs, outputs, and interconnections (MPT-Br. 37) is wrong. MPT proposes a single subtracter in isolation, without regard for ***what*** is being subtracted. Any type of coder will have subtracters somewhere, but random subtracters are not at issue here; subtracters *for developing frame difference signals* are, and those subtracters require specific inputs and outputs in order to develop those signals. Indeed, some of the specific inputs and outputs are explicitly recited in the claim—the "frame difference signals" (output of 36), "applied next frame signals" (input to 35), and "output signals of said prediction means" (input to 36). A349:25:39-41. *Northrup Grumman v. Intel Corp.* (MPT-Br. 37) is inapposite because that case involved different types of functions, "means for monitoring" and "means for generating." 325 F.3d 1346, 1350 (Fed. Cir. 2003). Of course, signals that are themselves being monitored or generated cannot be structure for monitoring or generating those same signals.

Here, however, structure "for developing . . . difference signals" (*e.g.*, subtracting) requires both operators (the subtracters) and operands (the input and output signals). The court properly included them.

3. The Structure Corresponding To The Function Recited In The "Controllable Quantizer Means" Limitation Includes The Components In Figures 9 And 10 For Performing The Disclosed Vector-Quantization Process

MPT also challenges the district court's "controllable quantizer means" construction. The recited function is "quantizing the difference signals mentioned earlier in the claim ***in accordance with a quantization schema that varies with the dictates of a control signal***." A49 (emphasis added). The only disclosed quantization schema, *i.e.*, "way of quantizing," is one that selects a "codebook vector" to quantize the frequency coefficients. A344:15:27-28; A51. As the court recognized, the quantization is performed by QVS 38, which includes all the components of Figure 10 (the internal circuitry of QVS 38) and, in turn, Figure 9 (the internal circuitry of element 80 in Figure 10). A49-50; A338:3:32-24; A61 (reproduced below). MPT contends that only two subparts of element 80 (quantization encoder 81 and subtracter 84) are necessary. (MPT-Br. 38.) MPT is wrong.



The specification and inventor testimony confirm that Figures 9 and 10 describe the specific quantization schema disclosed, a "vector quantization." A343:14:64-345:18:17 (describing QVS 38 and Figures 9 and 10); A1261-63, A1267-69; A1302-03 (distinguishing other quantization schema such as scalar quantization in H.264). Similar to the "leaky prediction" from the prediction means, MPT seeks a construction directly contrary to what it disclosed in its patent. The inventors disclosed a specific vector quantization schema, not a generic quantization process. A1267-69; A2364-66; *see also Smiths*, 183 F.3d at 1351, 1357-58 (corresponding structure for "means for supplying gas having a hollow interior and first and second openings at opposite ends thereof" was not a "generic" squeezebag, but the specific "double-entry" squeezebag set forth in the detailed description of the invention).

MPT's contention that only certain subparts of element 80 (quantization encoder 81 and subtractor 84) perform the recited function ignores both critical functional language (the "quantization schema" and the requirement that the schema vary "with the dictates of a control signal"), and how the quantization schema operates. MPT treats "quantization" and "vector selection" as entirely different operations (*e.g.*, MPT-Br. 38-40), but the patent could not be clearer—they are inseparably linked to perform the recited function. The codebook vector, along with the target distortion level, "controls" the quantization level for each of the difference signals,[14] and the various structures within Figures 9 and 10—in response to the control signal (*i.e.*, the target distortion level, or amount of "acceptable" noise)—work together to determine which codebook vector will be used for quantizing the difference signals. A343:14:63-A345:18:17.

The components within Figures 9 and 10, and the accompanying disclosure, show a multitude of ***alternative*** paths for quantization that can be chosen. Blocks 79 and 80 (of which there are sixty-four in parallel, one for each DCT coefficient), along with combiner 88 work together to determine the error (*i.e.*, noise introduced by using that quantization) and bit rate for each quantization vector in the codebook:

[14] Indeed, MPT's expert Dr. Richardson conceded that the codebook is "the heart" of any vector quantization process. A1840-42.

- Each block 80 determines and outputs the error and rate for each potential quantization for each DCT coefficient (*e.g.*, not a single quantization but multiple possible quantizations).

- Each block 79 takes a block 80's outputs and the collection of codebook patterns from block 87 to select which of the output triplets (from the internal structure of block 80 depicted in Figure 9) to utilize for each codebook vector.

- The error and bit rate for the sixty-four DCT coefficients are then combined in combiner 88 to get the total error and total bit rate corresponding to a codebook vector. The system still has not selected which quantization will be used, only potential quantizations corresponding to the possible quantizations in the codebook.

- Threshold circuit 89 then chooses the optimal codebook vector for minimizing bit rate according to an acceptable total noise, *i.e.*, the target distortion level, and then outputs the chosen codebook.

A344:15:18-A345:17:12; A1257-59. Thus, it is the combination of all components within Figure 10 that varies the quantization according to a control signal—*e.g.*, the target distortion—not merely block 80.

Similarly, each component in Figure 9 (block 80's internal circuitry) is further necessary to perform the recited function. The component within QVS 38 that evaluates the selection error and rate estimate—used by threshold circuit 89 in determining which quantization to use—includes Figure 9's circuitry. A344:15:57-16:32 (describing how "each element 80 of FIG. 9 receives cell information and delivers a quantized signal, selection error signal and rate information for each of the possible quantization levels of the system"). The output of quantization encoder 81 is quantized output data for one ***possible***

quantizer for each DCT coefficient. A344:16:2-11. The output of rate calculator 86 is the calculated rate corresponding to the number of bits "that would be required to describe the signal of the incoming cell, ***if*** quantizer 81 were selected as the best quantizer to use." A344:16:23-27 (emphasis added). The output of path quantization encoder 81, quantization encoder 82, multiplier 78, adder 83, adder 84, and ACC (accumulator) 85 corresponds to an error or distortion for that quantization level. A344:16:2-21. Thus, for the threshold circuit to be able to compare the distortion and the rate for each codebook vector—which is used to vary the quantization according to a control signal—all components of Figure 9 must be included.

MPT's contention, meanwhile, runs afoul of the recited function because MPT's proposed structures cannot possibly vary the quantization with the dictates of the control signal, and ignores a whole host of components necessary to quantize the frame difference signals. First, including only a single quantization encoder (81) means that the quantization ***never changes***—*i.e.*, it cannot "var[y] with the dictates of a control signal"—since box 81 has a single quantization value (*i.e.*, "each of the encoder and decoder pairs in FIG. 9 employs a different quantizer"). A344:16:9-11. Second, the output of 81 is not the quantized frame difference signal. Rather, it is ***a potential*** quantized DCT coefficient. Based on the "codebook," "block 79" still has to "select[]" the right group of possible

quantized DCT coefficients. A344:16:61-A345:17:12. And even that is not the actual quantized frame difference signal, because "threshold circuit 89" has to select the optimal quantizer based on the rate and the distortion or selection error. *Id.* The specification explicitly describes Figure 9 as "how a set of selection error signals is calculated ***in preparation for*** codebook vector selection," A338:3:32-33 (emphasis added), and, as discussed, the threshold circuit uses the selection error to determine which potential quantization pattern is actually used.

The court correctly included the components in Figures 9 and 10.

B. The District Court Correctly Construed '878 Patent, Claim 31's "Means Responsive To The Video Input Signal . . ." To Include Circuit 37

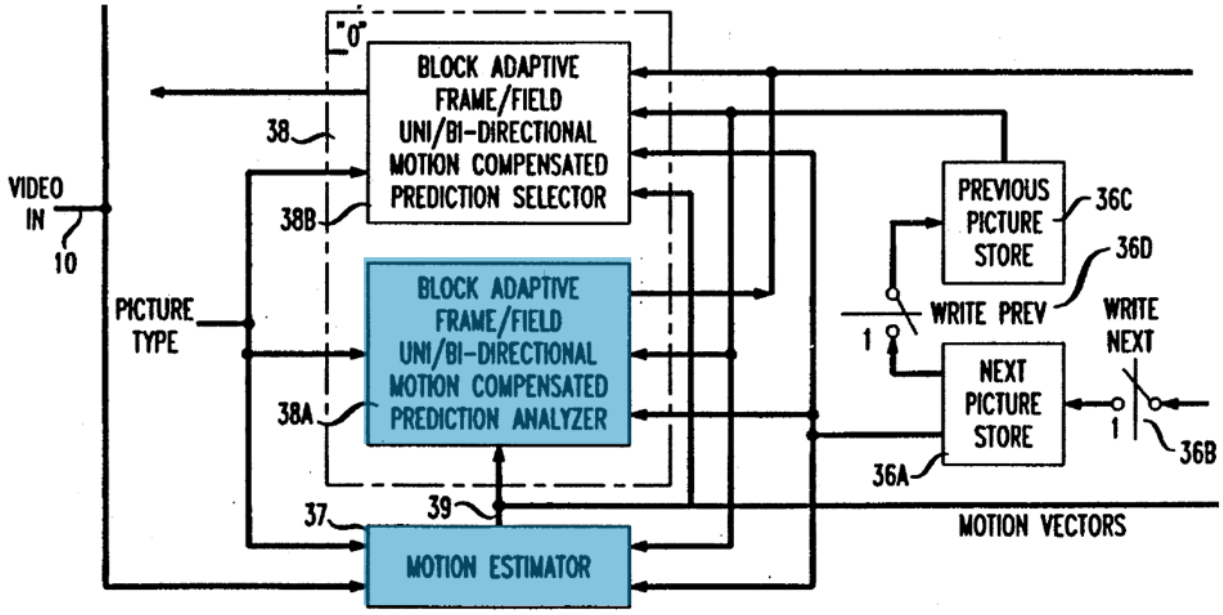
Claim 31 of the '878 patent recites:

> An apparatus for encoding digital video signals, comprising:
>
> a means for receiving a digital video input signal comprising a succession of digital representations of picture elements making up at least one video frame, the frame comprising a plurality of fields;
>
> a means for performing adaptive motion compensated encoding of groups of digital representations in the input signal relating to one of frames and fields in the input signal; and
>
> *a means responsive to the video input signal prior to encoding for producing a motion compensation type signal for controlling the adaptive motion compensated encoding means*.

A417:92:34-47 (emphasis added). Claim 31 generally discloses an encoder for adaptive motion-compensated coding of video based on particular characteristics,

such as whether frames or fields, whether I-, P-, or B- pictures, and whether intra- or inter-coded signals are being coded. A2797-99.

The recited function of the "means responsive to" term is "producing a motion compensation type signal for controlling the adaptive motion compensated encoding means." A37. This limitation, the court explained, "must be responsive to the video input signal and produce a motion compensation type signal." A37. The court held that the corresponding structures were motion estimator circuit 37 and motion compensated prediction analyzer 38A. A39 (graphic reproduced below).



MPT agrees that 38A is required structure, but not motion estimator 37. (MPT-Br. 40-42.)

This issue is similar to the "means for developing said frame difference signals" in the '377 patent. Like subtracters 35 and 36 that work together in the '377 patent, motion estimator 37 and prediction analyzer 38A work in concert to perform the recited function, the "produc[tion]" of a motion-compensation-type signal. As the court correctly noted, it is motion estimation circuit 37 that "receives the video input signal." A38. The claim limitation explicitly notes that the means is "responsive to the video input signal," which clearly links to motion estimation circuit 37. A417:92:44. Only after circuit 37 produces the motion vectors responsive to the video input signal does "[t]he prediction analyzer 38a [respond] to the motion vectors produced by the motion estimation circuit 37." A377:12:21-23.

C. The District Court Correctly Construed '878 Patent, Claim 13's "Means Responsive To A Motion Compensation Type Signal For Selectively And Adaptively Performing . . ." Decoding

Claim 13 of the '878 patent recites:

> An apparatus for decoding a compressed digital video signal, comprising:
>
> a means for receiving a compressed digital video bit stream; and
>
> *a means responsive to a motion compensation type signal for selectively and adaptively performing motion compensated decoding of frames of the compressed video bit stream*.

A416:90:31-38 (emphasis added). The decoder in claim 13 generally discloses a decoder for selective and adaptive motion-compensated decoding of video based

on particular characteristics. The disputed "means responsive to" limitation contains the recited function "selectively and adaptively performing motion compensated decoding of frames of the compressed digital video bit stream and fields of the compressed video bit stream." A15.

In a case MPT filed against Microsoft in 2002, the district court previously construed this term. The court here properly held MPT to that construction. A15 n.2. The construction was also correct.

1. Issue Preclusion Applies

Issue preclusion alone requires affirmance. *Hydranautics v. FilmTec Corp.*, 204 F.3d 880, 885 (9th Cir. 2000); A15 n.2. MPT concedes that the first two factors are met, challenging only whether the claim construction was "necessary to the judgment"[15] in the Microsoft suit. MPT argues that it is unknowable which claim-construction elements the jury relied on in finding non-infringement. (MPT-Br. 53-55.) Not so.

The ***only element*** that Microsoft and its expert relied on for non-infringement was the "means responsive to" decoding element. *Lucent Techs., Inc.*

[15] Notably, expressly to avoid "preclusive effect" of prior claim-construction orders (even where no "judgment" existed), MPT sought to vacate such orders in *MPT v. Microsoft Corp.*, No. 07-CV-00747, Dkt. No. 219 at 1, Dkt. No. 222 (S.D. Cal.), and *MPT v. DIRECTV*, No. 09-CV-0278, Dkt. No. 709 at 2, Dkt. No. 712 (S.D. Cal.). But MPT did not seek, and thus the district court did not grant, vacatur of the '878 claim-construction order in the earlier Microsoft case, No. 06-CV-0684, where there had been a judgment.

v. Microsoft Corp., No. 06-CV-0684, Dkt. No. 784 (S.D. Cal.) (May 20, 2008 Trial Tr. 51-87); *see also* A10500-03 (discussing substantial evidence of non-infringement based on non-equivalence of structures for this element). Indeed, MPT's post-trial motions there focused on the ***exact claim-construction issues*** MPT raises here. A10497-500.

Moreover, while Microsoft did argue insufficient evidence of indirect infringement and infringement by downloads (MPT-Br. 55), neither of those individually or in combination would have supported the jury's verdict for all accused products and theories, as MPT accused Microsoft of direct infringement as well. *MPT v. Microsoft Corp.*, No. 06-CV-0684, Dkt. Nos. 547 & 637 (S.D. Cal.) (2d Corrected Pretrial Order and Order entering Pretrial Order). Also, MPT's conjecture that the jury might have disbelieved its expert is contradicted by the post-trial order, which made no such suggestion and indeed noted that (in the Microsoft case) "the Court was more persuaded by MPT's expert." A10501.

Accordingly, to find non-infringement as to all Microsoft products, the jury necessarily examined the claim construction of the "means responsive to" decoding element and then compared the accused products in that case with that claim construction—indeed the specific limitation at issue here—making the construction absolutely necessary to the judgment, and thus preclusive.

2. The District Court Nonetheless Correctly Construed The Corresponding Structure

The court correctly identified these structures in Figure 2 as structure corresponding to the claimed means (A15-20, graphic reproduced below):

- circuit 54, as further shown in Figure 12;
- circuit 80;
- circuit 94, with its internal circuitry further shown in Figures 15, 16A, and 16B;
- summing element 92;
- picture stores 100C and 100A;
- circuit 100, with its internal circuitry further shown in Figures 3, 4A, and 4B; and
- all interconnections of these elements.

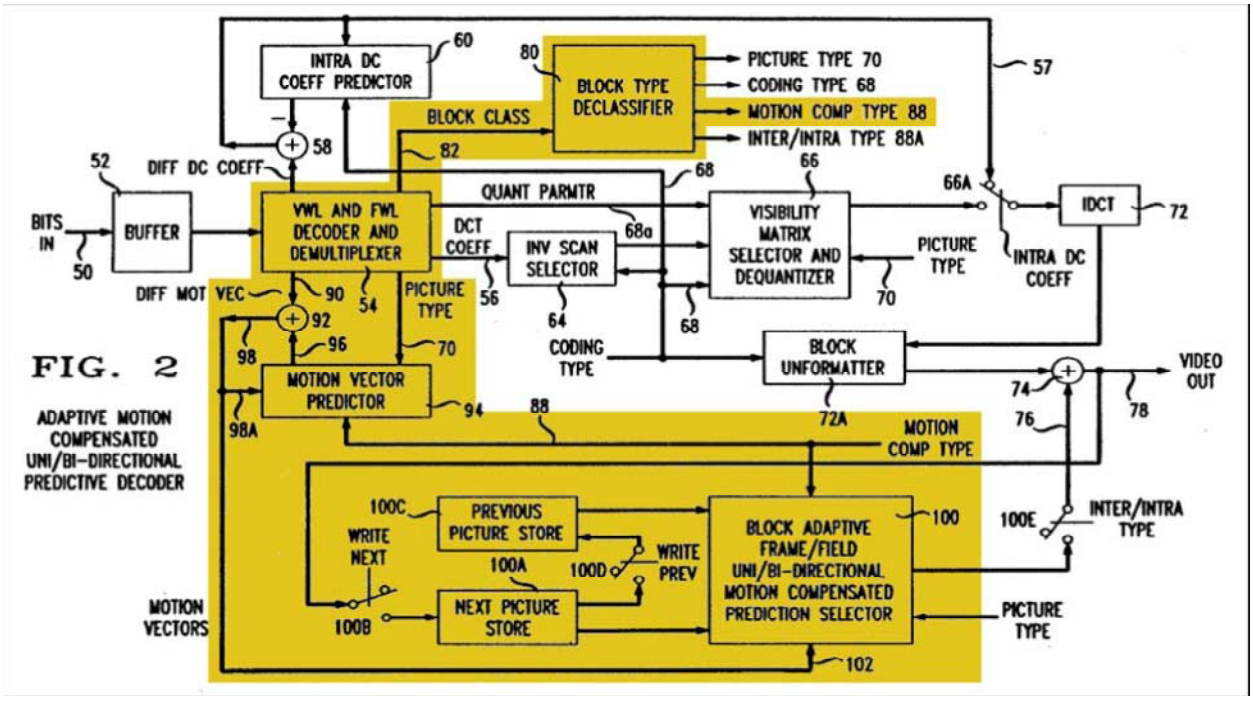


FIG. 2

ADAPTIVE MOTION COMPENSATED UNI/BI-DIRECTIONAL PREDICTIVE DECODER

MPT contends that (a) the court erroneously required circuit 100's internal circuitry to be able to decode *both* P-pictures and B-pictures, and (b) the corresponding structure should be defined as circuit 100, block unformatter 72A, and adder 74. Both arguments lack merit.

(a) Circuit 100's Internal Circuitry Includes Figures 3, 4, And 12 Because The Recited Function Requires Decoding Of Both P- And B-Pictures

The court correctly determined that the corresponding structure must be able to decode both P-pictures and B-pictures, and the parties agree that Figure 3 shows circuits for P-pictures and Figure 4 shows circuits for B-pictures. The recited function explicitly calls for "selective and adaptive" decoding, and one of the signals that the decoder selects between and adapts to is the "picture type signal," *i.e.*, whether it is a P- or B-picture. A376:9:27-30. As the court explained,

> Circuit 100 receives the 'picture type signal' to inform it whether to operate on P-pictures (using the circuitry shown in Fig. 3) or on B-pictures (using the circuitry shown in Fig. 4). . . . Thus, the inclusion of the 'picture type signal' controlling circuit 100 also confirms that the circuitry of both Fig. 3 and Fig. 4 is required for circuit 100 to perform the claimed function.

A17. Indeed, circuit 100 is called a "block adaptive frame/field ***uni/bi-directional*** motion compensated prediction selector"—with unidirectional referring to P-pictures and bidirectional to B-pictures. A359 (Figure 2) (emphasis added); *supra* at 7 n.2. Moreover, circuit 100 also receives information from previous picture store 100C and next picture store 100A—structures whose inclusion MPT does not

contest—and 100A is pertinent *only* to B-pictures. A379:15:27-16:51 (referencing 100A only as to Figure 4, not Figure 3). Figure 12 is likewise necessary structure because the B-picture-decoding operation of decoder 54 is shown and described only with respect to that figure. A378:14:12-17; A383:24:47-60.

MPT suggests that there is some theoretical inconsistency between the court's construction of claims 13 and 31 (MPT-Br. 45), but there is good reason why the court included P- *or* B-pictures for encoding claim 31, and P- *and* B-pictures for decoding claim 13—the functions are different. A16-17. Claim 31 is to an encoder. The encoder has the latitude to choose which motion-compensation-type signal to use for any given frame or field, choosing either B or P, but not both. Put another way, in the *encoding* process, each picture can be only one of P or B, and the encoder knows which one it will be selecting, so by definition the structures in Figures 3 and 4 are alternatives. By contrast, in the decoding process, the decoder does not know whether it will be receiving I-, P-, or B-pictures. And thus the decoder must have structure to decode both P- and B-pictures. Unable to identify those types of variables in the accused products, MPT seeks to limit the decoder to one type or the other, but this reads out structure that is directly pertinent to the "selective" and "adaptive" decoding function.

(b) The Court Correctly Identified The Corresponding Structure

In seeking its alternative construction, MPT again ignores the recited function. It also repeats the critical flaw, permeating its claim-construction arguments, of seeking to diminish the overall structure by eliminating individual components that, by themselves, do not completely perform the recited function. The patent specification makes clear that the set of structures identified by the court is responsive to motion-compensation-type signals and the structures work together to selectively and adaptively perform motion-compensation decoding, *i.e.*, decoding based on the particular characteristics of the block being decoded.

For instance, MPT asserts that declassifier 80 "plays no role" in the recited function. (MPT-Br. 51.) But, as the specification explains, "[t]he block type declassification circuit 80 produces . . . a motion compensation type signal." A379:15:4-7. Without the declassifier, it would be impossible to perform motion-compensated decoding. A379:15:4-7; A19; A10498 ("Without the declassifier, necessary information about the motion compensation mode would not be extracted from the incoming bit stream and made available to the other components.").

MPT similarly errs in arguing that because decoder-and-demultiplexer 54 "does not perform any motion compensated decoding ***itself***," it should not be included. (MPT-Br. 50 (emphasis added).) In many (if not most) cases involving

detailed circuits, algorithms, and systems, there will not be any one structure that will—by itself—perform the entirety of the recited function. But that does not mean that none of those structures is included. Instead—as the court correctly held—all structures that combine to contribute to the recited function should be included. *Gemstar*, 383 F.3d at 1362. The claimed motion-compensated decoding requires the ability to decode motion vectors. A18, A90. Those vectors are decoded in the first instance by decoder 54. A379:15:11-15 (decoder-and-demultiplexer 54 "retrieves the differential motion vector signal from the bit stream sent by the encoder"). Indeed, block 54 is the only block in Figure 2 that acts upon "the compressed video bit stream" referenced in the function. A378:14:10-15.

Regarding motion vector predictor 94 (including its internal circuitry shown in Figures 15, 16A, and 16B) and summing element 92, MPT argues that these relate only to an unclaimed process. (MPT-Br. 51-52.) This again ignores clear language in the specification linking these elements to the recited function: "The motion vector prediction circuit 94 is ***responsive to a motion compensation type signal*** on line 88 . . . to produce a prediction of the motion vectors . . . to an estimation circuit 100[.]" A379:15:17-28; A18; A10499. Similarly, the specification explains that summing element 92 works in concert with circuit 94 and circuit 100 for performing the recited function. A379:15:17-28 ("The output

of the summing element 92 is a motion vector signal . . . directed to an estimation circuit 100."); A18. And the specification further links circuit 94 to the "selective and adaptive" claim language because its internal circuitry demonstrates that it is adaptive to whether B- or P-pictures are being decoded. A384:25:26-27, A384:26:8-9 (describing Figures 15 through 16B).

MPT would omit all of these interrelated structures that are linked to the recited function, and instead include only circuit 100, block unformatter 72a, and summing element 74. The court's identified structure initiates from the incoming "compressed video bit stream," A416:90:38 (input to decoder 54 and then spanning out from there), while MPT's proposed structure initiates from IDCT 72, which the parties agree is not part of the function or the structure. Finally, as a practical matter, even applying MPT's construction, the result at trial would have been the same, since MPT failed to identify the ***function*** for this claim element. A224; A2748-49, A2801.

The district court included the necessary structure in construing claim 13.

III. THE DISTRICT COURT CORRECTLY DETERMINED THAT APPLE'S LICENSES ARE PRODUCT LICENSES

New York law governs the interpretation of Apple's licenses with MPEG LA. A10373; A10154. Under New York law, "the objective of contract interpretation is to give effect to the *expressed* intentions of the parties," and the "best evidence of what parties to a written agreement intend is what they say in

their writing." *Law Debenture Trust Co. v. Maverick Tube Corp.*, 595 F.3d 458, 467 (2d Cir. 2010) (citations omitted). The court correctly interpreted Apple's licenses to the '878 and '226 patents as product licenses; thus, their covered products do not infringe those patents. Summary judgment should be affirmed.

A. The 2002 License Is A Product License

Although tucked near the end of its brief, MPT briefly asks this Court to unravel the district court's careful analysis by holding that the 2002 License was a field-of-use, rather than a product, license. (MPT-Br. 62-63.) This contention should be dismissed out of hand as contrary to MPT's position below. MPT's counsel expressly informed the court that it was *not* seeking an interpretation that the 2002 License was a field-of-use license: While MPT "think[s] [the 2002 License] is a field-of-use agreement . . . , I thought I made clear, and I want to make it clear again so it's twice in the record, we are not asking Your Honor, to interpret the 2002 agreement as a field of use agreement." A20652; *accord id.* ("we decided among ourselves are we going to ask the judge to reconsider and rule for us on the 2002 as a field of use license, and the answer is no, we did not"). The court did not err in failing to adopt an interpretation of the 2002 License that MPT expressly disavowed and thus waived.

Under its plain terms, the 2002 License is a product license. It grants Apple a "[redacted]

[redacted]" to make, use, and sell "MPEG-2 Decoding Products" and "MPEG-2 Encoding Products." A10350-51, §§ 2.2, 2.3. Sections 1.14 and 1.17 define those products broadly as covering "[redacted] . . . which is primarily designed *in whole or in part*" for decoding or encoding MPEG-2 video. A10347-48 (emphasis added). The covered products include an entire "[redacted]. *Id.*

MPT now argues that the 2002 License is only a field-of-use license because the covered products are limited to "*components 'primarily designed*' for encoding/decoding MPEG-2 video." (MPT-Br. 62 (emphasis added).) MPT takes this term out of context. The covered products are not limited to MPEG-2 "components." Rather, those defined terms cover "[redacted]"—including a multi-component product as expansive as "[redacted]. Moreover, the licensed products need only be "primarily designed in whole *or in part*" for encoding or decoding MPEG-2 video. Additional functionality, therefore, does not prevent a product from being licensed.

Section 2.8 further confirms that the 2002 License was a product license. Section 2.8 recognizes that products "capable of complying solely with the MPEG-1 Standard and no other portion of the MPEG-2 Standard" are *not* licensed.

A10352 (uppercase omitted). As the court held, this provision demonstrates that, "once a product is an MPEG-2 product," it "is licensed for all uses because it is capable of acting as an MPEG-2 product." A205. Thus, by its plain terms, the 2002 License is a product license.

B. Section 2.7 of the 2011 Renewal Was Void And Unenforceable Because It Was Not A "Royalty Term Or Rate"

The court also correctly concluded that the product scope of the 2002 License carried through to the 2011 Renewal. In the Attachment, Apple rejected any changes to the 2002 License except amendments to "royalty terms or rates." A10392, ¶¶ 1-2. The new field-of-use limitation in Section 2.7 is not a royalty term or rate and, accordingly, was "void and unenforceable." *Id.*

The plain meaning of "royalty" is "payment." *E.g.*, BLACK'S LAW DICTIONARY 1330 (9th ed. 2009) ("royalty" means "[a] payment"); THE NEW OXFORD AMERICAN DICTIONARY 1487 (2001) ("royalty" means "a sum of money paid to a patentee for the use of a patent"). And that is how the word is used throughout the 2011 Renewal. *See, e.g.*, A10135, § 3.1 ("[redacted]"); *id.*, § 3.1.1 (identifying "[redacted]"); A10137, § 3.2 ("[redacted]").

Section 2.7, by contrast, entitled "[redacted]," sets forth the substantive rights granted to the licensee, not payment terms. It does not contain any form of the word "royalty," nor does it in any way concern the terms or rates

of payment for the granted licenses. If Section 2.7 were somehow a "royalty term," it would be difficult to imagine any term in a patent license that would not be a "royalty term." Courts repeatedly distinguish royalty terms from field-of-use or other limitations on the scope of a license. *See, e.g.*, *Sandisk Corp. v. Kingston Tech. Co.*, 863 F. Supp. 2d 815, 825 (W.D. Wis. 2012); *Silicon Image, Inc. v. Genesis Microchip, Inc.*, 271 F. Supp. 2d 840, 856 (E.D. Va. 2003); *appeal dismissed on other grounds*, 395 F.3d 1358 (Fed. Cir. 2005). Accordingly, Section 2.7 does not apply and Apple's renewal remained a product license. A209-10.

MPT contends that Section 2.7 is part of Apple's 2011 Renewal because it is not listed in the Attachment's introduction. (MPT-Br. 58-59.) MPT, however, ignores the prefatory "including but not limited to" language, which makes clear that the listed provisions (Sections 1.19, 1.22, 3.1.9, etc.) are merely exemplary, not exclusive. "The word 'including,' when followed by a list of examples, is designed to *broaden* the concept being defined," such that the examples "are illustrative only and do not limit the broad scope of the terms employed." *In re Doniger v. Rye Psychiatric Hosp. Ctr.*, 122 A.D.2d 873, 876-77 (N.Y. App. Div. 1986) (emphasis added); *see also Fed. Land Bank v. Bismarck Lumber Co.*, 314 U.S. 95, 100 (1941) ("'including' is not one of all-embracing definition, but connotes simply an illustrative application of the general principle"). Indeed, as the court recognized, accepting MPT's argument "would render the language 'but

not limited to' meaningless," in violation of New York law. A208 n.8; *Helmsley-Spear, Inc. v. N.Y. Blood Ctr., Inc.*, 687 N.Y.S.2d 353, 357 (N.Y. App. Div. 1999) (courts should "avoid an interpretation that effectively renders meaningless a part of the contract").

MPT also argues that "including but not limited to," ubiquitously used in contracts, is "too indefinite to constitute an enforceable contractual term." (MPT-Br. 59.) Neither of MPT's cited cases—*F&K Supply, Inc. v. Willowbrook Development Co.*, 288 A.D.2d 713 (N.Y. App. Div. 2001), and *Lovisa Construction Co. v. County of Suffolk*, 108 A.D.2d 791 (N.Y. App. Div. 1985)—supports that remarkable argument. That phrase does not even appear in either decision. Where the phrase has been considered, it has been held "unambiguous and clear on its face." *Doniger*, 122 A.D.2d at 877.

When it finally turns to the language of Section 2.7 itself, MPT contends that it "plainly concerns a 'royalty term'" because it "describes which products may be licensed" and "is directly in the chain of provisions that govern Apple's royalty-payment obligation." (MPT-Br. 60.) The court properly rejected this argument, for *every* provision in a license agreement could be said to be part of the "chain" leading to a royalty payment. However, a term's indirect, attenuated impact on the royalty obligation does not make the term into a "royalty term or rate." Quantity terms, for example, would affect the overall price paid, but that would not

transform quantity terms into "royalty terms." Thus, as the court correctly determined, Section 2.7 is related to "the rights that are conferred to the sublicensee" and is not a royalty term. A209.

MPT criticizes the court for comparing Section 2.7 to Section 1.19, which defines the "MPEG-2 Standard" and which the Attachment expressly lists as not a royalty term or rate. (MPT-Br. 61.) MPT agrees that Sections 2.7 and 1.19 are similar—"both concern which products are covered by the license." (*Id.*). Here, MPT seeks to ignore the listing—an ironic position given its principal focus on the listing. In any event, regardless of MPEG LA's disagreement on the enumerated list in the introduction, Section 2.7 (as well as Section 1.19) is plainly not a royalty term or rate, and MPEG LA clearly agreed to paragraphs 1 and 2 of the Attachment, which are not limited to any particular listing.

MPT also seeks to ignore the omission of Section 2.7 from Article 3 of the 2011 Renewal, entitled "Royalty and Payments." A10135-42. As the court recognized, that context is relevant. A209; *Westmoreland Coal Co. v. Entech, Inc.*, 794 N.E.2d 667, 670 (N.Y. 2003) ("every part" of a contract "will be interpreted with reference to the whole") (citation & internal quotation marks omitted). MPT baldly asserts that Article 3 requires consultation of Section 2.7, but points to nothing as support, and there is none. (MPT-Br. 61.) MPT also contends that the listing should have referred to terms "outside of Article 3" (MPT-Br. 62), but this

again ignores that the listing was merely exemplary. It also improperly seeks to impose MPT's preference for the contract language over those agreed to by the parties.

Because the field-of-use provision in Section 2.7 is void and unenforceable under the Attachment, the 2002 product license governs the scope of Apple's 2011 Renewal—that license is a product license.

C. Extrinsic Evidence Is Irrelevant

In a perfunctory, single sentence, MPT argues that the 2002 License and 2011 Renewal are ambiguous, without citing any law, identifying any terms that it contends are ambiguous, or attempting to explain how any extrinsic evidence supports its interpretation. (MPT-Br. 63.) Such an undeveloped argument is waived. *See Martinez-Serrano v. INS*, 94 F.3d 1256, 1259 (9th Cir. 1996) ("Issues raised in a brief that are not supported by argument are deemed abandoned."); *SmithKline*, 439 F.3d at 1320.

Regardless, the licensing provisions are not ambiguous, so extrinsic evidence is irrelevant. "[E]xtrinsic evidence 'may be considered only if the agreement is ambiguous.'" *Brad H. v. City of N.Y.*, 17 N.Y.3d 180, 186 (N.Y. 2011) (citation omitted). MPT seeks to use extrinsic evidence to *introduce*, not resolve, ambiguity. But ambiguity "cannot be created by extrinsic evidence that the parties intended a meaning different than that expressed in the agreement." *Id.*

In any event, MPT's proffered evidence on the "unilateral expression of one party's postcontractual subjective understanding" of a contract is "not probative as an aid to the interpretation of the contract." *In re Sherwood v. Town of Lancaster*, 75 A.D.3d 1161, 1163 (N.Y. App. Div. 2010) (citation omitted). The court properly declined to resort to extrinsic evidence. A209-10.

* * *

The court correctly held that, on the plain language, the 2002 License was a product license and the 2011 Renewal did not alter that. And because MPT concedes that a product license precludes infringement of the '878 or '226 patents for licensed products (MPT-Br. 14, 56), the Court should affirm summary judgment that those Apple products do not infringe the '878 or '226 patents.

CONCLUSION

The judgment should be affirmed.

Dated: February 12, 2014

Respectfully submitted,

/s/ Justin M. Barnes
JUSTIN M. BARNES
LARA S. GARNER
FISH & RICHARDSON P.C.
12390 El Camino Real
San Diego, CA 92130
(858) 678-5070

MICHAEL J. MCKEON
FISH & RICHARDSON P.C.

/s/ Gregory A. Castanias
GREGORY A. CASTANIAS
JENNIFER L. SWIZE
JONES DAY
51 Louisiana Ave., N.W.
Washington, DC 20001-2113
(202) 879-3939

WILLIAM C. ROOKLIDGE
JONES DAY

1425 K Street, NW, Suite 1100
Washington, DC 20005
(202) 783-5070

FRANK P. PORCELLI
FISH & RICHARDSON P.C.
One Marina Park Drive
Boston, MA 02210-1878
(617) 542-5070

Counsel for Defendants-Appellees LG Electronics, Inc., LG Electronics Mobilecomm U.S.A., Inc., and LG Electronics U.S.A., Inc.

3161 Michelson Drive, Suite 800
Irvine, CA 92612-4408
(949) 851-3939

MARRON A. MAHONEY
JONES DAY
77 W. Wacker Drive
Chicago, IL 60601
(312) 782-3939

Counsel for Defendant-Appellee Apple Inc.

CERTIFICATE OF COMPLIANCE

1. This brief complies with the type-volume limitation of Federal Rule of Appellate Procedure 32(a)(7)(B) because it contains 13,987 words, excluding the parts of the brief exempted by Federal Rule of Appellate Procedure 32(a)(7)(B)(iii) and Federal Circuit Rule 32(b).

2. This brief complies with the typeface requirements of Federal Rule of Appellate Procedure 32(a)(5) and the type style requirements of Federal Rule of Appellate Procedure 32(a)(6) because it has been prepared in a proportionally spaced typeface using Microsoft Office 2007 in Times New Roman 14pt.

Dated: February 12, 2014

/s/ Jennifer L. Swize
Jennifer L. Swize

CERTIFICATE OF SERVICE

I hereby certify that on February 12, 2014, the foregoing NON-CONFIDENTIAL BRIEF OF DEFENDANTS-APPELLEES was filed on the CM/ECF system, which constitutes service of the document on the following principal attorney:

Kathleen M. Sullivan, Esq.
Quinn Emanuel Urquhart & Sullivan, LLP
51 Madison Avenue, 22nd Floor
New York, NY 10010
kathleensullivan@quinnemanuel.com
Counsel for Plaintiff-Appellant Multimedia Patent Trust

/s/ Jennifer L. Swize
Jennifer L. Swize